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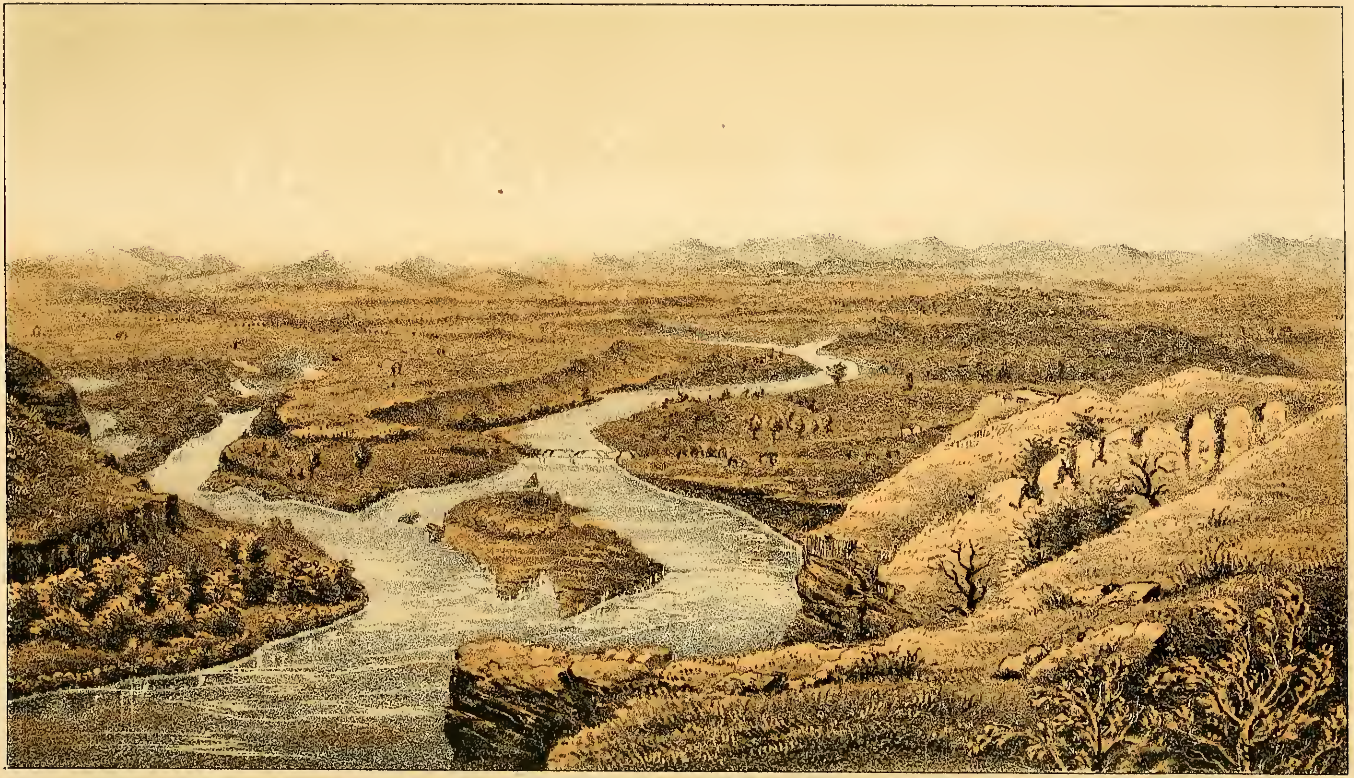

THE "THREE FORKS"—MADISON, GALLATIN AND JEFFERSON RIVERS, FORMING THE MISSOURI,
NEAR STERLING, MONTANA.

THE

MISSISSIPPI

VALLEY,

AND

PREHISTORIC EVENTS:

GIVING AN

ACCOUNT OF THE ORIGINAL FORMATION AND EARLY
CONDITION OF THE GREAT VALLEY; OF ITS
VEGETABLE AND ANIMAL LIFE; OF ITS FIRST
INHABITANTS, THE MOUND BUILDERS.
ITS MINERAL TREASURES
AND AGRICULTURAL
DEVELOPMENTS.

ALL FROM AUTHENTIC SOURCES.

BY C. B. WALKER.

R. T. ROOT, PUBLISHER.
BURLINGTON, IOWA.
1881.

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PREFACE.

The object of this book is to supply the means of acquiring a clear idea of the Origin, Extent, Resources, and Development of the Mississippi Valley. No work before the public embraces this information.

Can a subject apparently so familiar in its general features as the development of the Valley of the Mississippi be clothed with fresh interest? A brilliant and durable prosperity must have an extraordinary cause; and a region that has reacted with such happy effect on the character and destinies of a great nation must be worthy of close study. That study will show that the Valley is only *beginning* to make itself felt in the country and the world, that its natural advantages are wholly unequaled by any section of the globe, and that its People and Institutions are equally superior.

Scientific studies on its original formation have been principally confined to learned books. Presented in a condensed and popular form, they will be found of fascinating interest; while a complete view of its surface features, its vast area, its variety of climate and soil, its agricultural and mineral resources, its rivers, lakes, and plains, and wide expanding rim, with the peculiar course and significance of its human history, show it to be the grandest and most desirable region in the world. It is to be a mighty element in a wonderful Future. The works of the Mound Builders, before authentic history began, furnish evidence that it was even then the abode of a numerous and prosperous people, and nourished one of the Primitive Civilizations of the world.

The publisher feels justified in saying that in all the range of English literature no publication can be found embodying so many valuable and interesting facts, collected from reliable scientific investigators and from the remains of antiquity, presented in a manner so pleasing, and, at the same time, free from dry and tedious details. It can not fail to please all friends of literature and science.

INTRODUCTION.

Within the last half century the world has been passing through changes of a new and striking kind. Many tendencies that had been long acquiring strength in secret, have suddenly come to the surface and taken control of life and thought; directness and force, leading to results of world-wide importance such as no previous period could show, have become characteristic of most displays of energy in practical fields, and made the general situation for mankind at large extremely different. It reminds us of the flowering time of the plant when new parts are suddenly unfolded, new purposes and powers revealed, and all its vital energies concentrated on the final work of maturing the fruit.

Science is one of the chief factors in this suddenly quickened progress. It has learned to make its studies at once minute, comprehensive, and accurate. By carefully examining every particular, putting all the facts together to learn the significance of the whole, and then returning to a consideration of the relation of the parts to the general result, it seems to lay bare the secrets of nature. There are few things which it appears capable of concealing from an inquiry so searching, and the practical and the mental worlds seem to share about equally in the grand discoveries. The earth and the history of man have acquired a new meaning, and are invested with greater interest.

Tracing effects back to causes, science finds conclusive proof of what before could only be dimly suspected, that all things are bound together in a true unity; that the solid earth has passed through a succession of changes as orderly as the stages of growth in a plant or an animal, each change contributing to the general advance toward a foreseen end. It is continually finding new evidence that the earth was fitted up with reference to human history; and history is found to show more clearly the more carefully it is studied, that it has been guided with reference to the structure and varying resources of different regions of the earth.

The physical structure of Europe has exerted immense influence on civilization, ancient and modern; the wonderful effect of the peculiar resources and position of England on its people and the world is well known. The American continent as a whole, the transfer of European institutions to it and their subsequent re-action on development in Europe, also illustrate this law. The Mississippi Valley is in itself a case strongly in point, and in some peculiar ways.

Its grand outlines were drawn in the earliest geological times; it was constructed with great simplicity throughout its general surface, but very elaborately on its borders, where all the resources of volcanic force, of heat and chemical activity were taxed to enrich it with various treasures; glaciers of almost continental magnitude were employed to provide it with a rich, deep soil; it has an unrivaled location and its system of water-ways gives it a magnificent unity. Nature was lavish of her best, and did not change her mood from first to last.

It is interesting and significant to note how carefully the course of human history was guided to preserve this fortunate Valley from permanent occupation by any people whose genius and stage of development rendered them unfit to be its heirs. The primitive civilization of the Mound Builders was broken up before it became too strong, being, probably, more fully developed in Central America and Mexico; the

Indians were no true owners since they sought little but its game and wild fruits, and soon gave way to a superior race; the Spaniards flitted across the Lower Valley or along its coasts, and disappeared, overwhelmed in the misfortunes produced by their own violence; the French soldier or priest was soon lost to view under the forests, or maintained a precarious and uninfluential foothold at a few points along the rivers; and the Spanish, French, and English governments intrigued in vain with Indians and colonists to establish their control over it in later years.

But there was a people to whom the Valley took kindly, among whom were the germs of thought and character which could produce the best institutions and make the wisest use of its great resources. They wandered across the eastern mountains, under the friendly shelter of the tall forests, and felt themselves at home. Though the Indian swung his tomahawk and raised the war-whoop, nature smiled on them. They had no thought of retreat, though the settler must be warrior as well as farmer for almost a generation. The trees fell before his axe, and gradually the grain fields waved green and gold in the summer breeze—rough homes of peace and plenty multiplied over the whole vast region; the rudeness and vices of the border soon gave place to the well-settled order of old communities; while the freeman found himself nowhere so free, the business man was nowhere so prosperous, and the State, the school, the church, the press were nowhere so flourishing.

Here was ample room to show that unrestricted political freedom does not necessarily lead to disorder; that business and trade are governed by laws of their own, which may correct the disturbances of personal ambition; and that a loose society, with little pressure but its own choice, may prefer to establish and maintain the best institutions of the highest civilization. The time had come for such lessons to be very effective. Presently England gave most of her colonies equal freedom, and the tension of authority among the nations of the Old World has long been giving way.

Thus we find the first and the last parts of the Valley's history unified. A thread of *intention* connects its geology with the latest developments in the history of its enterprising inhabitants, and the whole forms a prophecy of the future of no small interest. Accumulated causes, in our day, hurry into effects; industrial and commercial forces have become immense—in the Valley especially—and are daily gathering strength, and the surprises of the past will sink into insignificance before those of the near future.

The problems of liberty and national unity have been solved already and completely by the help of the Valley. But these were only preliminary questions. How shall these boundless resources be so used that all classes of the people shall be prosperous? How shall the great questions of industry, finance, and commerce be settled so that injustice shall be done to none? Nature here furnishes the means to any desired extent; it is the true adjustment that is required; the field is roomy, the forces are fairly free to move. Notwithstanding many seeming contradictions, man and nature, here at least, are equally well meaning, on the whole, and the harmonizing law of relations and interests is active and strong. We may therefore believe that the beneficent re-action of the Great Valley on the welfare of the nation has only begun.

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THE MISSISSIPPI VALLEY.

PART FIRST.

THE ANCIENT HISTORY OF THE MISSISSIPPI VALLEY AND OF THE MOUND BUILDERS, AS RELATED BY SCIENCE.

The discoveries of Columbus, and of Portuguese mariners shortly before, opened an era of great importance to Europe and to mankind. They lifted the veil that hid another world from the eyes of the dawning modern civilization, enlarged tenfold the field of adventure and of business activity, and stimulated enterprise by the promise of brilliant rewards. For a thousand years Europe had been a general battle field, whereon fierce passions, towering ambitions and conflicting interests had wasted the resources of church and state. These new openings for energy gradually relieved the deadly stress of conflict between nations and classes, and changed destructive forces into agents of progress and prosperity. In this reconstruction of views and interests, which was made slowly but surely, many illusions and false notions, religious, social and political, disappeared. Mankind seemed now to come of age, so to speak, and enter, for the first time, on the serious work of life.

New experiences and a vast multitude of new facts could not all be harmonized with old theories, and the habit of more attentive observation, which the necessity of fresh explanations gradually introduced, led to the re-organization of the old sciences and to the development of many new ones. It was the starting point of truer study by more careful investigation. The world, for instance, was proved to be round by mariners who constantly sailed in the same direction till they at length came back to their starting point; this laid a solid foundation for a true theory of the planetary system and the starry world; stimulated inquiry into the laws that govern the motions of the heavenly bodies, and thus enlarged and corrected the Science of Astronomy. In a similar way every branch of knowledge profited by the great events of the Columbian Era.

Yet it took a long time to find out the most effective and reliable methods of study, and to teach men not to draw conclusions too hastily. Many difficulties were met in organizing this practical school. It was not easy to throw off the influence of old habits and views, and men found it hard to believe that those who had been revered for their learning in former times could have made so many great mistakes. The great men and the theories of the past had become identified with institutions whose influence and authority seemed to be attacked by the new learning, and persecution was frequently added to the other embarrassments of the student of science.

Many of the sciences required long and difficult researches, and the observations which must furnish the material for true theories accumulated facts slowly. The science of geology properly commenced with the inquiry how marine shells could have been placed in the heart of rocks and on the top of mountains. It was long before the true explanation could be found. Some rocks did not contain shells at all, but bore the appearance of having cooled from a melted state. These were so numerous, especially in some regions, that it was believed by some that all rock was formed in that way, although that view did not satisfactorily account for the rocks containing the shells. Other regions showed very few, or none, of these fire-made rocks, nearly all contained the remains of organic life, and, the principal effort being to account for them, the theory was advanced that all rocks were formed in water. Much study and discussion followed before it was seen that both these theories were necessary to a complete explanation.

Sometimes it was necessary that one science should reach a certain degree of perfection before it could shed the necessary light on important questions of another; and in others the whole world had to be pretty well known before the true theory could be framed. There was a great attraction in making fresh discoveries, the interest the questions raised constantly increased, and, as every part of the earth became more fully known to the civilized world, the dark points were gradually cleared up. A theory that is nearest the truth will explain the largest number of facts, and, led on by increasing breadth and clearness of explanation, men of science slowly and painfully conquered the difficulties in their way.

But, if the conquest was slow and painful, it was also sure, for it had the solid basis of nature to rest on. If they made mistakes, examined too hastily, and formed conclusions without the most mature consideration, the ever accumulating facts would convict them of error. In this way they learned extreme caution, sought the most accurate instruments and methods to aid their investigations, and, in our own day, have become renowned for the precise and patient care bestowed on their labors. "Scientific Accuracy" implies the most thorough study and the most absolute certainty which the nature of the subject admits.

The glory of all past ages pales before the achievements of the scientific world of our generation and of that which immediately preceded it. The warriors, the statesmen, the artists and the thinkers of past ages appear childish bunglers when compared with these broad-minded, clear-sighted, intellectual and practical giants of our time. The almost miraculous development of the industries and comprehensive activities of recent years, the means by which distance and other obstacles have been deprived of their power to separate men and keep them in ignorance of each other, all come, directly or indirectly, from scientific discoveries. So useful has science become to practical life that it has been made, to a great extent, the general superintendent of the business undertakings, of the social and political affairs, and of the thought of the world. If it has too lately received that high position to have banished false principles and injurious violation of the laws of nature, of business and of association, it is yet steadily and vigorously working toward that end, and can not well fail of ultimate success.

Science has acquired this great influence by doing its work within its own special field with great and conscientious thoroughness. It will take nothing for granted, it requires proof; it shuns no labor to arrive at certainty, it will not deceive others nor itself, and declines to pronounce upon a theory until all the facts have been sufficiently examined and reasonable doubts removed. These are its fundamental principles. Some of its teachers, indeed, fail to be always governed by these principles, for they are often more or less imperfectly imbued with its spirit, but their influence is lost in proportion as they are unable to sustain their positions by convincing proof. Science belongs to the material world, the world of facts which are capable of being proved, and it has taught the world the carefulness in receiving such proof that it uses in seeking for it.

Geology has been perfected with this painstaking care. Several miles of the original depth of the rocks of the earth have been turned up to the light of day by the immense forces that assisted in its structure, and they have laid bare, somewhere, nearly every leaf of its journal of its own life and history. By long and patient study its alphabet has been learned and the strange journal read. Chemistry, Zoology, Botany, Physiology, Astronomy, and many other sciences have aided in its work, for they are all branches of one great Science of Nature. As the special energies of each department of nature had their part in *making* the earth, so the facts of each science now assist in explaining *how* it was made. Not everything is known. On the contrary, study seems only now to have fairly commenced. It has surveyed the general field, it has disciplined its workers, organized its forces, and found out the right way to use them. It has exercised its eye, its hand and its judgment so thoroughly that they can work together with great rapidity and certainty.

It has learned that nature is not a confused collection of contradictions, but that the different parts form a consistent, well-proportioned and harmonious whole; that the laws now controlling its operations are universal, that they always and everywhere produce the same effect under the same circumstances. This unity of nature enables science to transport its students to distant times and far away regions of the universe. The laws of proportion in the animal frame are so well known that, with a few bones, it can reconstruct the whole animal, discover its habits and the circumstances that surrounded it while living. The chemical constitution of the rocks and the animal or vegetable remains found in them, or absent from them, reveal the condition of the seas and the land during the period from which they date. Thus science walks back and forth through the long ages of the past, and studies each period, each class of vegetable or animal life and the operation of the forces that produced it, with even more ease and certainty than a traveler can study a country and its productions, as they stand in all their completeness before his eyes, at the present day. In some respects the observer can get nearer to the secrets of the past than those of the present. Here he can not always go behind the curtain, but there the curtain is drawn, and he has a closer view of causes.

Science sometimes meets with agents and methods of study that make the most important and wonderful revelations. For instance, light, as reflected by different objects, was found to make various revelations as to the *nature* of those objects, and by this means a multitude of facts in regard to the constitution and condition of the sun, and other distant bodies, were very positively made out. So much clear and precise knowledge has been gained in the last fifty years, that it would be presumptuous to undertake to mark the future boundaries between the known and the unknown, or perhaps to say that *any* subject awakening the interest and curiosity of men will not be sufficiently investigated and cleared up to fully satisfy that curiosity.

The outlines of what science has revealed of the past of one of the most important regions of the earth, are given in the First Part of this work. So far as we can discover all the labors of nature are directed toward an ultimate end in connection with man. The Mississippi Valley seems to have been formed with peculiar care on a broad and simple plan and to have been supplied with a variety, abundance and excellence of useful materials seen nowhere else in the world.

It can not but be of interest to note how and when the original plan of the great Valley was drawn, and how the operations that stored it with so many treasures were conducted. Science is able to give a very clear and connected history of this long process, and also to furnish a most interesting tale of an ancient and mysterious people of whom written history knows almost nothing, or at least nothing definite. The facts and the manner in which they have been studied and their meaning learned are contained in a multitude of books. The details must be sought in those. It is only the general conclusions that are here given.

CHAPTER I.

HOW NATURE FORMED THE GREAT VALLEY.

The Book accepted as a Divine Record and Revelation by the Jews, and afterwards by Christians, opens with a brief and partial outline of the origin of the earth and its progressive fitting up for the use and residence of man. Nature itself must be a revelation, if its narrative can be read, and the two records should be in harmony. The Bible account contains a very brief summary, and leaves wide gaps in the outline—touching but few points. Naturally it would not be fully comprehended until the outline was completed and explained by a multitude of details. This was the task of science, and the more definite and unmistakable its conclusions become, the more decisive appears the agreement between the two records.

The Bible commences with "the beginning," when the elements, which came ultimately to their present state, were formless, confused, and utterly "dark;" confines its statements concerning the early periods chiefly to the origin and development of light, to the gradual introduction of plants and animals, and, finally, of man. Science commences with an examination of the finished work—with the earth as it is now—and follows the process back, step by step, to the time when no life existed, and when it first became possible for the earth to be illuminated as it is now. It confirms, explains and fills up the Bible outline so far as it can reach positive conclusions. It discovers evidences of a heated state in which rocks and metals were melted, or existed only in the form of gas or vapor, through which the light of the sun could not penetrate. The earth gradually cooled, a crust formed over the molten mass, the vapors condensed and fell to the surface as water, and minerals diffused in it, much of which last at length became solid, leaving the atmosphere as a transparent gas through which the bright sunshine fell on the solid surface, or the waters, and in which a portion of the water, whenever turned to vapor by heat, floated as clouds, became condensed and fell in the form of rain.

Astronomy and chemistry aid us to go back a step beyond even this state of fusion, and confirm the Bible statement that the earth was "without form and void, and darkness was upon the face of the deep;" when progress commenced by "movement," or motion, communicated by some power to the diffused elements of matter. Men of science see reason to conclude that the material of the solid mass of the earth, as well as its liquid and gaseous parts, existed then as thin vapor, the particles of matter being widely separated, thinner and lighter than air, and cold and *lifeless*, so to speak, because they were not near enough to act and react on each other. To introduce this action they must be condensed—brought into contact. When this was done great activity commenced, producing an immense development of heat accompanied by "light." In this state of lively action particles of the same kind sought each other, came together, or *condensed*, ultimately hardened, and a direct process of fitting up the surface for man commenced.

So far, therefore, as the two records touch on the same points they mutually confirm each other; the order in which organized living things were introduced in later times being substantially the same in each. The Bible narrative is incomplete, yet remarkably exact as far as it goes. The word "day," in the sacred narrative, which has perplexed so many and formerly caused the conclusions of science to be looked upon with suspicion, is used in several senses in that narrative itself, and is now commonly regarded as presenting no obstacle to the harmony of the two records.

It is, therefore, believed that the whole planetary system was, at first, one vast mass of vapor, which, gradually contracting as it revolved, threw off successive rings which collected in separate masses and condensed independently—the process of condensation being more rapid in proportion as the masses were smaller. The vast central mass—the sun—still remains in the condition in which the earth once was—a ball of glowing fire—the other planets being in the various stages of progress according to their size and rate of motion. This is a theory long since entertained, and, though doubted by some or considered not fully proved, it seems to be confirmed in various ways by the researches of science.

Heat is latent, or unperceived, in vapor. It is developed by motion—it is said to be a *mode* of motion—and it appears to be connected with all the vast activities that have made the earth what it is. The most violent motion produced, or was accompanied by, the greatest displays of heat. When the boiling matter of the earth began to part with its heat, it contracted so as to occupy less space. It boiled down, so to speak, the lighter and the heavier elements separated, the gases and the vapors that were to form the atmosphere and the waters—or to be gradually returned as solids at a later period—became the envelope of the heavier pasty mass at the center.

Thus the central mass thickened, shrunk, as it parted with its heat, until a scum or crust formed at the surface. At first this crust was too hot to allow the vapor to condense into water but it continued to thicken and cool until a universal sea covered it. The waters were at first hot and saturated with corrosive minerals, which eat into and wore down the surface of the hardened rock, so that this was finally buried under a thick layer of these minute fragments. These fragments gradually consolidated and formed the first or azoic rock—which contained no sign of life—that was raised out of the waters. It was this which, pulverized by the atmosphere, the rain or the waves, furnished material for the layers of rock formed in later ages. Each age left in the rocks formed in it some traces of its plant and animal life.

It would seem that, by the operation of some law as yet unknown, the surfaces where the continents were to be, hardened first, and the lines that were to separate the future continent and ocean were drawn at the very beginning. The study of coast lines, of mountain chains and their various ages, with the forces that must have raised them, proves a steady operation of influences in the same direction from the beginning, and renders it quite improbable that the continents and ocean beds have really ever changed places to any great extent. The continents and their immense ranges of mountains were steadily lifted (or prepared to be raised) while the ocean beds were as steadily depressed until late in geological times. Apparently this result was largely due to the stiffening of the crust over the continental areas first. The melted rock contracted eight to twelve per cent in volume as it cooled and became immovable ; that which cooled last would lie lower and be thinner and more yielding at any given period ; and as the mass beneath cooled it shrunk, and the crust must settle to find support. As it settled to the smaller dimensions of this shrinking ball the crust must wrinkle and fold and produce the mountain systems and continental plateaus of the earth. As the sea bottoms lay lower and yielded to the descending movement most readily (being somewhat thinner because later formed) they must find room by pressing obliquely up against the borders of the continents, thereby tending to raise them as a whole, as well as to fold them, in places, into mountain chains.

Accordingly, mountains are usually found not far from the border of the continents, are steepest on the sides which front the sea, from which the strongest lifting pressure came, and it is found that the higher mountains of a continent border the largest ocean. In America, the Rocky Mountains bordering the wide Pacific have broad plateaus and high peaks, while those near the narrower Atlantic are more modest in all their proportions. The same peculiarity is observed on all the continents, which points to a general and uniform law of elevation.

The almost inconceivable power producing this elevation is thus the result of the contraction which steadily follows the cooling of the earth, and possibly, to some extent, the chemical changes and the force of gravity which consolidate the materials of the rocks so that they occupy less and less space. Since rocks, in cooling, lose from eight to twelve per cent in bulk, the surface crust was obliged by its weight to follow the contraction beneath.

This process is extremely slow, and the strain produced on all the surface rocks by contraction seems to have had its long periods of accumulation during which it manifested itself by a slow rise and fall of the surface over the continental regions. In some places the changes of level were great and long continued, in others slight but changing more often. Along the site of the Alleghany Mountains there was a long period of slow sinking. Nearly *eight miles* in thickness of rock was there formed. The character of the various layers showed that they were all formed not far below the surface of the water—-the sinking and the formation of rock continuing to be about equal during the whole period. There were frequent changes in the direction of the movement over the general surface of the future Valley of the Mississippi, but its range seems to have been small, only about 4,000 feet of rock being formed in the Central Valley.

There were several periods during which this force violently eased itself by permanently raising some part of the crust high above the rest. During the first of these periods of permanent rising the Great Valley seems to have been outlined.

Land was first made along the northern border, and it is believed to have formed the oldest of all the continents. It stretched from Labrador southwest, along the northern rim of the Great Lakes to Minnesota, with another branch from Lake Superior northwest far toward the Pole. The eastern side of the Valley next the Atlantic was then raised, and if land near the Pacific was not made then there was, at least, a sub-marine ridge, and ever thereafter the site of the Valley remained enclosed, sometimes as an interior shallow sea, and at others as low-lying land. The surface of the Valley was always the most stable part of the Continent.

After these liftings and some efforts at making mountains in a comparatively small way in Canada and New England, there was a very long period of uneasy movement, during which the land slowly gained on the water along the northern and eastern border of the Valley; but no great or extensive elevations were made. All the rocks and minerals of the Northern and Central Valley east of the Mississippi were made during this time, which was followed by a great display of force. The Alleghany Mountains were raised, and with them probably more than half, possibly two thirds, of the Valley became permanently dry land. This was a far greater display of force than any former elevation, and it is believed by some that the Alleghanies made the first great mountain chain raised on any continent.

Much of the surface of the Gulf States was still under water and an arm of the sea, or a channel some hundreds of miles wide, lay between the Missouri River and the site of the future Rocky Mountains. Another period of comparative quiet followed; but still greater forces were gathering, and finally, in the early part of modern geological time, made the grandest show of power the history of the earth can present. The long chain of the Rocky and Andes Mountains was raised, during which period of elevation a region of the continent a thousand miles wide was lifted into high plateaus, which served as a basis for many lofty mountain ranges. The western and southern parts of the Valley were raised at the same time. All the highest plateaus and loftiest mountain ranges of other continents also date from this period. All this was accompanied with fearful earthquakes, with immense activity in volcanoes and the gushing forth of vast quantities of lava from long clefts in the rocks which must have been many miles deep.

This seemed to have been the great and, in some degree, definite adjustment of the surface of the earth to what lay beneath it. Apparently the surface, or crust of the earth, had become extremely thick and solid, and the former elevations of land and mountains had only partially relieved the strain, which continued to accumulate while the thickness and solidity of the crust also increased, until the pent-up giant force could only be relieved by these vast elevations.

There were frequent changes of level over wide regions in later times and there is much local movement to this day; but it appears to be chiefly a temporary shifting of level without any great world-wide or very permanent changes. What is the present condition of the interior of the earth, is a question on which geologists are not fully agreed. To settle it requires a comprehensiveness of knowledge not yet acquired. Many of the most eminent authorities consider it probable that pressure has so far overcome the expansive force of heat that the center of the glowing mass is solid and that a fluid mass lies between it and the surface crust. The mysterious behavior of magnetic forces has suggested that as an explanation. Others suppose that there has never been such a sea of molten fire beneath the cold crust as has been described; that pressure and the cooling process hardened the surface and the interior at the same time.

This view allows the same degree of heat in the interior but contends that it did not prevent the solidifying process. The heat has always been escaping—ascending from below through the colder rocks—and the surface changes—sinking of ocean-beds, raising of continents and mountains, and other displays of immense force—are due to the unequal contraction of the cooling rocks lying below those already cooled, and to the unequal qualities of the surface rocks as conductors of heat. This leaves the same horizontal strain in the surface rocks, and the way in which the force is applied to produce the great elevations and constant movements noticed is explained with much plausibility.

It is, however, a recent theory, requires mature consideration, and is not yet received by the exceedingly respectable authorities here followed. Still, it may prove to be true. The earth, as a whole, has been proved to be more than twice as heavy as the weight of its surface rocks would make it, so that extreme density for the interior or a vastly heavier substance must be supposed. It is still an open question how this is to be explained, and it was one of the chief reasons for the acceptance by some of the solid theory. To accept it would vary the explanation of continent outlining and mountain making, but would not demand any other change.

CHAPTER II.

HOW ROCKS ARE MADE AND HOW THEIR "STORY" IS READ.

We have seen that, amidst all the seeming confusion of the earth in its earlier periods, an orderly and measured progress appears to have ruled from the first. Motion produced notable changes and change was controlled and guided towards certain definite ends. The materials that came finally together to produce the earth, as we now see it, were all scattered over an unspeakably vast space as vapor or "star dust." Examples of that state of things are believed to exist still in the Universe by astronomers. They are called Nebulæ.

By some means movement was commenced among these thinly diffused particles of matter—they attracted and repelled each other; from this proceeded heat. Particles of the same kind attracted each other most strongly and produced separation and concentration, and progress was commenced. This continued until the highest degree of heat was produced and then concentration was carried forward by the process of cooling until the separation of the mass of heavier material from the lighter, by the formation of a crust, made another long step forward. These lighter materials took the form of air and water; the water fell to the surface or floated as vapor in the air, and these two, assisted by powerful chemical agents and the vast forces we considered in the previous chapter, commenced the work of reconstructing the surface material of the hard-crust—that is, began a new process of rock making.

At first chemical and mechanical forces worked alone. After a time another agent appeared—the Life Force. This busy and intelligent workman was a remarkably skillful chemist and builder, varied the style and the aims of its work according to circumstances, and so distinctly different are the forms it produced in each period that the geologist uses them as a guide in his researches.

The position of the rocks and some of their more general, as well as peculiar, features show in what age they were made. But these characteristics are not always present or may not always be distinct enough to make them reliable as a guide. So many changes have occurred that nowhere in the world do the entire series of rocks lie in regular succession one above the other. When any part of the crust of the earth was raised out of the water no rock was formed, and sometimes, while so raised, many layers already formed were in part or in whole washed away. Then the same surface was often sunk under water again and another series was formed of a later period, leaving a vast break in the series at that point. Sometimes they were so disturbed by elevating forces that it would be difficult to tell where they belonged but for the animal or vegetable remains in them.

A careful study of these remains reveals the remarkable fact that some classes of animals are wholly confined to certain series of rocks, and that the varying tribes, families and species of these classes are limited to particular layers in the series formed during a certain period. These remains, therefore, are a most important aid in classifying rocks. The life force, as has been said, varies the forms according to the condition of the climate, of the air and the water, and a thousand local or general circumstances. These indications, joined with the chemical structure of the rocks, the special materials of which they are composed, the marks of mechanical force which they bear and their position, furnish the alphabet of the language in which they tell their story.

It is a language that requires to be learned by study and pains; but when once mastered it is very clear and definite in conveying information. It is the most reliable of histories, for it is the record made by the events themselves as they passed. It is the phonograph of the long ages before there was a human observer, repeating the story of its own times to us much more exactly than such an observer could have learned it.

This story is told in four different volumes; that is to say, there are four periods and four classes of rocks called Azoic, Palæozoic, Mesozoic, and Cenozoic. These are Greek terms: Azoic meaning *without life;* Palæozoic, *ancient life;* Mesozoic, *mediæval* or *middle life,* and Cenozoic, *recent life.* The Azoic rocks contain no traces of life; the Palæozoic rocks, lying above the first, inclose the oldest remains of life that have been preserved; the Mesozoic rocks rest above the Palæozoic, and contain remains of plants and animals more like those which now exist; and the Cenozoic rocks, lying highest of all, except when they have been thrown out of place by elevating or disturbing forces, contain recent forms of life or which bear a close resemblance to those now existing.

The igneous rocks (ignis is Latin for *fire*)—those which cooled after having been melted—lie at the bottom underneath all the rest, except in cases where they have been thrown out of volcanoes, or have otherwise burst up and overflowed the surface through breaks in the crust, both which cases have been very numerous. Sometimes the rocks originally lying above them have been thrown off in mountain-making or have been quite worn away by the atmosphere, rains, and ice. These forces have always been actively at work crumbling away the elevated surfaces of the land and carrying away fragments and fine material in blocks, pebbles, sand, and mud, to form new layers in the waters. These layers form "aqueous rocks" (aqua is Latin for *water*).

All the four classes above-mentioned differ from the igneous rocks. They are the finely worn material of the igneous, or of other aqueous, rocks spread in horizontal layers at the bottom of water, yet sometimes made wholly or partly of the broken, or finely ground, remains of organic forms, or sometimes formed by direct chemical action.

The Azoic rocks show that there was a long time after the waters covered the surface, during which there was too much heat, and probably, also, too strong infusions of chemical substances unfriendly to life to permit its introduction. The rocks of that period were deeply affected by heat, sometimes rendering it difficult to tell that they were ever stratified or formed of successive layers, as is the case with all aqueous rocks. It is believed that a deep layer of this primitive rock was spread over all regions before any land was raised out of the universal sea. Then contraction displayed its forces in making the first land, the waters must have cooled, while the chemical substances in them diminished, being deposited as rock.

Arrived at this point, seaweeds and the first animals appeared in the waters, vast beds of iron and copper were formed, and Palæozoic time had begun. The waters were soon alive with animals. One of the principal uses of the shell fish, so extremely abundant at this time, was to form limestone after their death from the stony covering in which they inclosed themselves in life. It was a very long period. Slowly the surface of the Valley rose and fell. After each change different classes of rocks were formed, different species of animals flourished in the waters and different varieties of plants appeared on the land.

No land animals are known to have existed then, and it was only in the latter part of this period that fishes appeared in the seas. Nature makes her great changes very slowly. So quietly were the elevations and depressions of the central Valley made that the rocks there were but little displaced or bent, and the sinking along the site of the Alleghany mountains was so slow that the formation of rock could keep pace with it; and when, at the close of this long period, these mountains were raised, it was so long in the doing that an eminent authority says, "motion by the few inches (or, at most, a few feet) a century accords best with the facts."

Nearly all the rock-making of the region east of the Mississippi River from the upper part of the Gulf States except the immediate vicinity of the river below the mouth of the Ohio, and perhaps all of Minnesota, Iowa and Northern Missouri, was done in this ancient time. On the northern and especially the eastern sides a large part of the material for rocks was obtained from the lands where other rocks were worn down and carried as mud, sand and pebbles to the sea; but in the quiet interior the rocks were chiefly limestone formed from the shells of its immense swarms of animals.

Toward the close of this period the sea seems to have been largely shut out. The general surface lay very near the level of the water and vegetable life, for the first time, predominated. When a vast amount of forest growth had been gathered, the surface sunk beneath the waters and the vegetable material was buried beneath mud and other rock-making material. A rise then occurred bringing the surface to its former position, the forest growth again springing up to be again buried, and so on many times in succession, each time furnishing material for a layer of coal. After a period of rest which allowed this to consolidate, the first great mountain-making period closed Ancient, or Palæozoic time. Only the surface of the upper and eastern Valley was afterwards modified or received additional material.

During Mesozoic time much, though not all, of the remainder of the Valley was filled out. In Texas there was a shallow sea, and a great thickness of limestone formed, while in the waters of the upper part of the Gulf States—which took in some of Tennessee and much of Mississippi and Alabama—there was probably a greater depth in which the chalk and flint formation was laid from shells of minute animals, and sandstones were formed from the material washed down from the lands to the north. What was done during this time in the broad channel between the Missouri River and the site of the mountains on the west is not so well known except in Nebraska and near the Black Hills where the rocks of the period are rich in the remains of the life of that time. Toward the close of the Mesozoic, the symptoms of the coming vast elevations of the great Mountain-making Era began to appear by the elevation of the sea-bottom near to, or just above, the surface of the water and much coal was made, in places, amounting to about fifteen thousand square miles in the Western Valley.

There was a very great change in animal and vegetable life, which shows that the climate and the general conditions on which the development of life forms largely depends were very much altered during the coal and mountain-making periods which closed ancient time. It was a transition from the Old to the New and closed with the supreme display of force which produced the largest mountain and high plateau systems of all the continents.

This elevation was not wholly completed until Cenozoic or recent time, during the first part of which the low lands bordering the Gulf were completed to about their present extent. The western plains in the Valley, which continued for a while to be a region of marshes and fresh water lakes, were then filled up and elevated.

This substantially completed the structural work of the Valley and of the continent, and introduced the general conditions of climate which still exist. With all the great changes which occurred on three of its borders, the Valley itself was a generally quiet region, even the elevation of the mountains, in which it shared, disturbing its rocks but slightly. Yet, slight as they were, these disturbances were of great importance. They produced a displacement, for instance, across Illinois, Northeastern Iowa and Southwestern Indiana crossing the Ohio River at Louisville, giving access to the strata laid in what had been, for the most part, the quietest region of the northern valley. Nature thus opened the book for science to read and, at the same time, accomplished various other important ends. These uplifts, when they broke and turned up the edges of the rocks, produced a great amount of heat, and the quality of the coal beds previously formed there was much improved thereby. The various layers of rock were also hardened and rendered more valuable as building material and the drainage was more or less improved.

Parts of Ohio, Kentucky, Tennessee, Missouri and Arkansas shared in these disturbances, during which nature took occasion to distribute some of the most valuable minerals where they would exert a powerful influence on the welfare of its future inhabitants. Wishing to render the central point attractive and valuable for historical and industrial purposes, she took much pains to enrich Missouri with minerals and to supply Illinois with a good quality of coal with which to work them at the least expense.

Thus all the rocks were formed with a variety of intelligent and benevolent purposes in view.

CHAPTER III.

HOW NATURE FINISHED THE VALLEY AND PREPARED IT FOR MAN.

The last part of the middle period, or Mesozoic time, and the first part of the recent period were occupied in the production of the vast mountain systems which left the continents at their present elevation, and with the same general relations to the seas and to each other as now. The division between the middle and recent times is made at the point where the forms of life that still exist began to appear in the rocks. Cenozoic time is divided by geologists into two parts, the first called the Tertiary, the second and last, which includes the present, the Quaternary.

The Tertiary is divided into three parts, according to the abundance of the species of life forms that still exist. The last of these is called the Pliocene, which means "more recent." A large proportion of the species of plants and animals found preserved in its rocks still remain. The next before it, and further back from us in time, is called Miocene, meaning "less recent." The first era of the Tertiary is called the Eocene, which means "the dawn of the recent." There are rocks of all these periods in the western and southern Valley, for the full outlines of those sections were not gained until the mountains and plateaus had reached their present elevation.

The gains of land in the Valley were not remarkably large in any of these three eras, for the general surface was already above the reach of the sea, but the rocks of those times that *were* made are of very great interest. They were chiefly fresh water formations from the Black Hills southward, and eastward from the base of the Rocky Mountains, and contain a very interesting class of fossil forms of the *land animals* of the three eras immediately preceding the age of ice and the appearance of man. A part of Dakota, Nebraska, Kansas, and portions of the territories bordering them on the west and south formed a lake region all through the Tertiary, or at least through the most of it. It was then a region of unstable level, very much like the eastern Valley during the age of coal-making, and the results were similar, for some 15,000 square miles of that region have beds of workable coal, which date from these deposits.

There is much that is extremely interesting in these coals and rocks besides the animal remains they inclose. Much of the coal is only partially reduced. It is called lignite, or woody coal, for the structure of the wood is often very evident and it has not all the density of true coal, nor its value for all purposes. The rocks are also less compact, in general, though in some situations, and when chemical conditions were favorable, very solid and firm building stone is found. Yet, the surface deposits were generally soft and loose, they did not have time to consolidate, and, being mostly formed in fresh water, which had less of chemical substances to unite and compact the materials, it was left comparatively friable.

For this reason the surface rocks were very heavily worn down and washed away in later periods, leaving deep river beds and here and there isolated embankments, pyramids, and figures of strange and fanciful shapes—the remains of the original layers. These sometimes very much resemble monuments of human labor, yet are always distinguishable by being *stratified.* Kansas, Nebraska, and Colorado furnish much curious and interesting scenery varied and beautified by this means. The strata of Tertiary times in the lower Valley were not washed and worn as much as on the plains and, for the most part, were more suddenly raised out of the sea.

The climate of this period was warm-temperate—very much like that of the southern Valley at the present day. Vegetation was therefore luxuriant and animal life abundant. With the close of the Tertiary the Valley was fairly complete in its outlines, in its general provision of metals and coal, and in the rocks suitable for the purposes of the future. When these should be sufficiently pulverized they would furnish elements of inexhaustible fertility to the soil.

The final processes that were to give to this broad region its crowning value for man were reserved to the last part of Cenozoic time, called the Quaternary period. In a region where the rocks next the surface are Azoic, or where they are of igneous origin, the soil is thin and of moderate fertility, often barren. Even if those parts of it which are crumbled by the atmosphere and frost are not washed away they do not contain the variety of elements necessary to an abundant vegetation; the soil is not deep enough to retain the necessary moisture, or it is too compact and clings too closely to the underlying rock to be sufficiently drained. It was necessary to provide against these disadvantages in the Valley. This was accomplished during the three epochs of the Quaternary.

These three eras are called the Glacial period, the Champlain period and the Terrace period. The last includes the time that is now passing. The causes of the Glacial period, or the Age of Ice, are not clearly understood—at least geologists are not agreed upon them—and various theories have been suggested, none of which seem to be entirely satisfactory. Some attribute it to astronomical influences. The orbit of the earth slowly varies during a long period and then returns to its original state. When it was most elliptical, and carried the earth furthest away from the sun in one part of its track, the Glacial era is supposed to have occurred. Some scientific men of great eminence favor this view. Changes in the amount of heat furnished by the sun, changes in the sea bottom of regions near the equator, or the sinking of the isthmus connecting the two parts of the American Continent, have been appealed to, as also changes in the atmosphere.

Studies on these theories are not sufficiently mature to determine what may be their real value as yet. It seems fairly certain that after the vast 'mountain elevations ceasing before the end of the Tertiary period the northern parts of the continents were considerably raised as a whole. It is thought that Behrings Straits were closed, and that the sea bottom of the Northern Atlantic was raised so that Europe and North America were connected for a time. This would shut out the warm ocean currents from the Arctic regions, and, joined with the general elevation, might account for the vast sheet of mingled ice, snow and water that slowly moved down to the central Valley. Such a condition of things now exists in Greenland, and the evidences of its former state, from the eastern part of New England to the Rocky Mountains, are very numerous and positive.

The flow of ice descended to the Ohio River or its vicinity. The softer rocks on the northern rim of the Valley were ground very fine, while great boulders, or blocks, of the harder rocks were broken off, imbedded in the ice, and brought far down the Valley with immense quantities of smaller fragments, pebbles and coarse gravel. The depressions of the Great Lakes are believed to have been made at first by volcanic action in early times, to have been nearly filled by a deposit of softer rock in the slow progress of Palæozoic and Mesozoic times which was scooped out and crushed by this resistless shovel and mill, and carried down into the Valley.

After this crushing process had accumulated the mass of "drift," as this loose material is called, at the lower extremity of the great glacier, the northern regions slowly sank again, continuing that process far below the present level, when it ceased and a rise again commenced. When the elevation that is supposed to have brought on this Age of Ice ceased and the sinking commenced, the climate began to grow warmer, the ice melted, the glaciers retreated to the neighborhood of the pole, and the Champlain Era began.

During this time the melting of the ice and the lower level of the northern Valley flooded much or all of it, and the distribution of the drift was effected. There were rushing currents that carried everything movable before them. The pebbles and heavier material naturally found the lowest place at the bottom of the drift. As the force of the currents diminished, the lighter and finer material was spread over the mass of loose stone, sometimes in very deep embankments of mud, and in the broad lakes and still waters of the period the silt containing the largest amount of material required for a rich, deep soil was slowly deposited.

This continued for some time after the rise had again commenced. When this rise had drained off most of the region the wearing down of the present river channels began. The vast amount of water to be drained off made very large streams, which may now be estimated in the distances from bluff to bluff on each side of the river bottoms, for originally the Valleys did not exist, the whole surface being very nearly, or quite, even and all the deep cuts of the valleys (probably where still more ancient river beds had been) were worn out by the streams. Sometimes the gradual rise of the general surface, which caused this powerful wearing down of the channels, was stopped for a while and the shore line formed a terrace or bench. This is called the Terrace epoch.

The Champlain Era, during which the drift was chiefly distributed, was so called because its effects are very marked in the region of that lake, and it was first carefully studied there. The Glacial, Champlain and Terrace Eras were parts of the one great and important period which gave the Valley its preeminence as an agricultural region. The first provided the material for a deep undersoil, the second spread it out systematically, so that the whole region should get the benefit of it, laid the coarse material beneath so as to form a natural drain, and held the lighter and richer materials in solution in the waters until they could be laid on the top.

The level prairies were the sites of shallow lakes which finally became marshes in most cases; the rolling prairies testify to the rush and recoil of the shallow fresh-water seas that followed the melting of the ice; and the ravines, the hills, and the smaller valleys indicate the washing away of portions of the surface in the process of draining. The plains, that gradually rise from the Missouri River, and from about the western boundary of the State of Missouri until, at the foot of the mountains, nearly 600 miles distant, they are 5,000 feet above the level of the sea, washed very heavily and sent much of the material at the surface to be distributed in the central Valley, or to fill up the basin of the lower Mississippi.

This material along the rivers is a purer and heavier deposit than is generally found elsewhere. Old river beds existed here before the age of ice, and the finest and best material naturally flowed toward these lowest levels. When the level of the land was so near that of the water as to render the currents light, very thick deposits were made. Sometimes the current would be stopped by an obstruction in the channel and then a wide-spreading lake would be formed, and so heavily were the waters laden with earthy matter that in time the whole lake would, perhaps, be filled with it. Nearly a third part of Iowa—the western part—the eastern part of Nebraska, with some portions of Kansas and Missouri, were covered by such a vast lake filled with this "Bluff Formation" or "Loëss," as it is called, and vast quantities of it were used to fill up the lower Valley of the Mississippi River. It is still being deposited at its various mouths, and making land into the Gulf.

These surface deposits contain much loam and chemical material required in vegetable growth, and to it are due the remarkable and durable qualities of the immediate undersoil. As soon as the water was drawn off or became sufficiently shallow, a rich vegetation sprung up and the marshes were filled, in the course of time, with a vegetable mold of great depth, and it accumulated over all the surface of the higher ground, though it was frequently washed down from the knolls and hills to lower surfaces. Unnumbered years of this growth and decay of plants and grasses on the prairies and fall of leaves in the forests collected a vast reserve of decayed organic remains, or vegetable mold, which put it in the best possible condition for the husbandman. Nature took abundance of time to fertilize the Valley and the civilized farmer found it the richest garden. The Animal Kingdom lent its aid to the Vegetable in this furnishing process. The vast mastodon, herds of buffalo and deer, and countless other animals, large and small, fed on its herbage and were "herded" there from birth to death. Thus was the work of preparing this favored region for its human occupant completed.

CHAPTER IV.

VEGETABLE AND ANIMAL LIFE — ITS ORIGIN AND PROGRESS.

The mysterious force we call Life is a wonderful and most intelligent Architect. All the resources of chemistry are at its command, and the best trained skill of science fails to reproduce its results, even with the same materials used in the same proportions. The usual laws and qualities of the matter it employs as building material bow to it as their master, being suspended in its presence, or adapting their action to its purposes ; and, armed with such authority, this invisible intelligence raises matter to a higher level of powers and uses with an unerring certainty and cunning skill wonderful to behold. In its hands *dead* matter becomes *alive.* It shows inexhaustible ingenuity in varying the form and details of different structures. Now it works them out with exquisite finish of detail, but so minute that many thousands may dwell together in a single drop of water with roomy ease, and again builds the ponderous elephant or whale, the tiny plant, the coarse shrub, or the mighty tree. The powers conferred on these works of its hand are equally various and wonderful. This plant produces a virulent poison, that a delicate perfume, the other a nourishing fruit. There is an endless display of different forms, qualities, and uses, which it is the office of the science of Botany among plants, and of Zoology among animals, to investigate, and the fields are so large that, after hundreds of years of study by enthusiastic learners, they are explored only in part.

The animal world is higher in the scale, more varied in form, in qualities, and in uses, to which its instincts and dispositions exactly correspond. Fierceness and courage go with powerful weapons of attack, while to weakness and timidity are joined strong defences, swiftness in flight or cunning arts of evasion. Each living thing exists for some sufficient reason or purpose, and every individual form of life is the intelligent development of a thought which it would require a volume to present in full detail.

This skillful and magic builder has been unwearied in labor. Ever since the seas were cooled and the surface rock pulverized, so as to furnish the necessary material for its operations, the products of its activity have been innumerable, with a constant variation of species of the same order or addition of different classes. Twenty thousand species from the Palæozoic rocks have been described, and these are probably but a small part of the number then existing; and so numerous were the individuals that the defensive armor or stony framework of some classes of them has, after their death, been formed into rocks of vast extent and hundreds of feet in thickness.

But various as are the forms which the life force produces its mode of operating is at first uniform. Its building process is commenced with a cell of soft or plastic matter which seems to understand perfectly what it is to produce, what materials are required, and how they are to be handled. A call is issued for material which passes through the wall of the cell and presents itself with obedient readiness. It is dissolved, re-combined, and laid in place. The cell expands, is divided, and the same process continued in each cell until the proper dimensions have been reached in every direction, and the necessary form and consistence has been given to every part of the organism; different materials or different combinations of the same material often being employed in different parts. Each part is endowed with the capacity to perform its appropriate work in the general result to be accomplished by the complete living thing in which it is placed. A multitude of organs work to a common end with infallible accuracy and harmony.

When each form reaches maturity, and the full development and power it was designed to receive within and without is gained, a part of its energies are employed in the work of preparing for a successor, or a multitude of successors, of its own form and kind—the germ of a new individual which shall reach the same development and possess the same qualities is produced. Thus the life and qualities of the first of each race are transmitted, and the origin of all the future individuals of its kind, however numerous or long continued the race may be, is provided for.

A small range of variation between the parent and the descendant is often seen, and a change in outward circumstances has been found to increase variation largely. Transmission of qualities and form is governed by definite laws, and, by observing these, important changes have been brought about by man in the management of the products of plants and trees, and in similar ways desirable qualities of domestic animals have been improved. Careful and careless cultivation make wide differences in the quality of farm and garden produce, while an intelligent attention to parentage may cause a great gain in the value of domestic animals; but the difference has never been known to be so great or fundamental as to originate in this way a wholly *new* animal or plant.

Variation is observed to accumulate, however, in long periods of time, and it is believed by many that in the long duration of plant and animal existence it may account for all the different varieties that have ever been known—that they all had their remote origin in one primal being. A study of life through all time shows that the most perfect animals and plants are to be found now, and that they constantly descend in the scale as the observer traces them back toward their beginning. According to this theory the life force in the first animals was feeble and indeterminate; it grew stronger and more definite as the circumstances became more favorable. The variations that founded all the different classes arose in the long periods of time seeming to be required for geological changes; so that the whole vast number of species and their surprisingly different forms and qualities are so many branches growing from one original stock.

This is rather a theory, striving to account for the succession of life on the earth, for the resemblances, diversities and gradual progress of its forms toward the ideal animal—man—than a proved scientific truth. The first forms of life may have been, and probably were, too slight in structure to be preserved in the early rocks, which were subjected to great changes by heat and chemical agents; there are various leaves gone from the volume of nature—at least they seem not to have been found, or, if found, have not been properly interpreted—and observation has not yet been able to trace the steps of the great transformations, if they really occurred, with the clearness and certainty that would amount to proof.

If the origin, relationships and progress of life are not to be accounted for in this way, how, then, are they to be explained? It has been usual, until recently, to consider that each distinct species of plants and animals was specially created by the intelligent Power from whose hand all things originally came, and that each was introduced when the circumstances were suitable. This, also, is without positive proof in the records of the earth itself. There is a class of rocks below which no trace of them has been found; they made their first appearance in small numbers, increasing in the later rocks, showing more perfect development, or, at least, more numerous and perfect species, until they disappeared or reached their present condition. How they came the rocks do not explain, and it seems as great an exertion of power to confer on the Life Force this wonderful gift of adaptation and variation, of changing its mode of structure in such astonishing ways and bestowing such an extraordinary diversity of capabilities and qualities on its different products, as to introduce them by direct creation.

Many experiments and careful studies have been made to ascertain if nature now contains within itself a power of spontaneous generation—of producing a germ without the aid of parents—but no such instance has been discovered; no hint has been given that nature ever possessed such a power, unless the fact of the appearance of new species and races may be so considered. On the contrary, early races are often found to combine in their forms and qualities the peculiarities of two or more races that afterward made their appearance, suggesting the idea that they may have been the original stock from which distinct branches grew. A large number of similar facts seem to give countenance to the doctrine of evolution, or the gradual development of different species and classes from those that preceded them.

There is certainly a law of evolution—an unfolding of many parts having close relationship to one stock or root—but it does not seem capable of explaining all the facts observed. The sudden appearance of classes widely different from any that had before been found is frequently noticed, for which evolution has no well-proved explanation; and a variety of similar facts seems to indicate the operation, occasionally at least, of some other law regulating the introduction and propagation of forms of life.

The most interesting question of all relates to Man as an animal and as an all-comprehending intelligence. In the general features of his bodily structure he is closely related to the higher animals, while in his mental and spiritual powers there is a world-wide difference. In one view he seems to be the climax of animal development; in another, he has a kind of faculties with a compass and power absolutely unparalleled in creation as we know it.

Physically, he stands as the ultimate end, the most perfect, the most beautiful and noble of all the products of the Life

Force. He is the finest sample of its architectural skill, and is endowed with a variety and breadth of sweep of physical capabilities and adaptations that place him at the head of the Systems of Life. But, by his intelligence and moral qualities he seems to be the significance, the end and purpose of the system of nature as a whole. He can combine and control chemical and mechanical powers so as to become superior in strength to all other forces of the organic world united. He is, therefore, King in the earth. He may penetrate the thought of which each part of nature is the embodiment, so that all nature is as a book made for his reading and instruction; and still above this quality is his range of moral powers; of distinguishing between right and wrong; of admiring purity and moral beauty, and of practicing virtue. These capacities of control, of reflection, of combinations whose results often resemble creation; his power of living in the past and the future by a well-trained imagination, render him immeasurably superior to every other animal.

How did he become so like and so unlike all the other products of the Life Force? It is the most interesting and the most difficult question which the consideration of the system of life suggests, and finds, as yet, no satisfactory answer in the researches of science. It is the last and deepest secret of the systems of nature and of life, and the key to them both. Science has demonstrated, very clearly, that definite purposes and ends unite all the stages in the development of animate and inanimate nature. Man was evidently designed to be the interpreter of the whole, to conquer all its secrets. They will be delivered to him in due time. The separate volumes are being carefully and successfully studied, and all the relations of one to the other will ultimately be apparent. Nature, with all its various parts and purposes, is evidently one and tends to one great end, which seems to be secured in the qualities, the powers and the destinies of its last and greatest production. Man can never rest until all the meaning which its various developments contain stands clearly revealed.

Though the Life Force seems to be a common principle in all the forms it organizes, and to follow the same methods so far as the objects it seeks permit, its manifestations in the different spheres of its activity are extremely different. There seems little in common between the tree, the fish, the horse and man; and yet there is a strong likeness in the first operations of the building force to which they all owe their existence; and there are points of contact in the great classes where it seems difficult to distinguish them from each other. It is difficult to tell that the lowest animals are not plants, and the least developed men seem to be only superior animals. They seem, in some respects, to be parts of one system of life; but the most characteristic examples of development in each place a world-wide difference between the classes.

The plant commences with a cell, or a collection of cells, and builds down into the dark and damp earth and up in the sunlight. It uses the earth as its support and both earth and air are its magazines of raw material, while, by its foliage, it expels some gases and takes in others—the light assisting in its work. In the animal the building force commences with a center and works each way toward the extremities—in the lowest animals not distinguishing a head at all, but spending more and more elaborate pains on that part as the animal rises in rank.

The higher plants are firmly fixed in the earth, have no power of movement and no self-consciousness. All but the lowest animals are free to move, have sensation, consciousness, and a certain power of will in the control of their motions; these gifts becoming more complete in the higher animals until they find a kind of boundless development in man.

The plant finds its nourishment without and near it and draws it in by attraction through its pores; the animal goes about for its food which it takes into a central cavity where it is digested and from which it is distributed through the system as needed.

The plant organizes its substance directly from the crude, unorganized material of the earth; but the animal depends on the plant world as its magazine of food. It uses only organized material—plants or other animals.

Thus the two kingdoms differ widely while being most intimately bound together.

CHAPTER V.

VEGETATION IN THE VALLEY, ANCIENT AND MODERN.

The system of life has two sides, the vegetable and the animal, which interlock to form a whole. In some respects, also, the system of vegetable life may be considered the base or condition of animal life. The building force goes directly to the mineral kingdom for its material when it constructs vegetable forms. Decayed vegetable or animal remains, indeed, speed its work, but only by furnishing the material required in greater abundance, thereby saving time and enabling it to build more sumptuously. Though the general plan is the same, the ends are different in each of the two systems. For the vegetable the aim is restricted and modest. It is the servant to wait upon the animal, the magazine containing the supplies for its physical wants.

This is the leading use of vegetable life, but various others are seen, in all of which service is rendered to the higher class. It aids in the collection and deposition of some metals very useful to man; it supplies petroleum and coal in vast abundance; it furnishes numberless materials for man's higher development; enriches the surface of the earth by the decay of its forms and covers it with beauty; supplies the most agreeable and nourishing fruits, and is a magazine of perfumes, of medicines and of art supplies. Much of this, however, was reserved for development as the human period approached. In the early days of Palæozoic time the builder employed comparatively little skill on vegetable forms.

The general plan of vegetable structures is radiate; that is, similar parts start from a common center, and spread out in various directions, while for animals there are five different plans by which the life forms of that kingdom are graded. There are, however, two great classes of vegetable forms—Cryptogams and Phenogams—the distinction being founded on their modes of reproduction. Cryptogams have no proper flowers or fruit, the seed which produces the new plant being of the simplest kind, and, for the most part, there is very little of the surprisingly elaborate and ingenious detail found, as a rule, in the higher class.

Phenogams have flowers which surround a system of organs employed in producing the seed that is to give birth to the young plant, and the seed is commonly furnished with a store of nutriment for the use of the germ in the early stages of its development. It is the parental instinct caring for the start in life of its offspring. Very often this thoughtful provision is of the greatest advantage to man. All the grains that furnish him with the "staff of life" are composed of this concentrated food for the young plant stored in the seed.

It seems entirely probable that vegetable life was introduced before any animal forms appeared, although geologists have not yet been able to prove positively that it was so. For a large part of the ancient time no plants are known to have grown on the land, only sea weeds having been preserved. Plants separate, concentrate, and store up in their forms the nutriment required by the animal, and probably the simplest possible vegetable growth had supplied a sufficient quantity of this in the waters when the first animals appeared. It was only in later times, after vast masses of rock formations had somewhat cleared the waters of their excessive chemical solutions, that vegetable substances became sufficiently firm to be preserved in the forming rock of their times.

Recently there have been found various and significant traces of vegetation in the Azoic rocks. The presence of carbon in various forms is believed to have originated in large part from vegetable growth, and the deposit of vast quantities of iron ore along the southern border of the most ancient land is by some considered due to the vegetation of the marshes of that time, the vegetable infusion in the water precipitating the iron oxyds washed down from the neighboring rocks. When the conditions suitable for sea weeds had been reached, the warm and shallow seas probably produced an extremely abundant growth and served to nourish the immense swarms of the lower forms of animal life which are known to have existed in the early part of Palæozoic Time.

Much the larger part of ancient time had passed away before the rocks began to record the existence of *land plants.* The first that has been satisfactorily distinguished as such was a species of gigantic club moss. It is probable that many varieties of lichens and mosses had long before flourished and laid the foundation for the extremely profuse vegetation that now hastened to make ready for the era of coal. The evidence seems to prove that the higher lands were not in a condition to support a profuse vegetation, and that trees and plants mostly grew in marshes or very near the surface of the water.

Many of the plants that are dwarfed in our age were then of great size. A large proportion of the coal was made from ferns and kindred plants, almost all being from the class of Cryptogams, of loose structure and rapid growth. The climate appears to have been about the same over all the globe, for the coal beds of every country made in the great coal period show that they were produced by exactly the same kind of forests. The temperature was evidently much like that of the Torrid Zone of our day, and there seems to have been a larger proportion of carbonic acid gas in the composition of the air, which would be sufficient of itself to increase the rapidity and luxuriance of vegetable growth. It was this extra carbon that was now removed to be stored up in the earth for future use.

The mountains of that time were few and of no great height, and the regions producing coal were low and marshy. The conditions were therefore favorable for the rapid production of the immense woody growth that has produced the hundred and fifty thousand square miles of workable coal in the United States—almost all of which is in, or near the borders of, the Mississippi Basin. From near the Atlantic shore to the Mississippi River, and some hundreds of miles beyond, was a vast marshy level directly across the Northern and Central Valley, and across Eastern Tennessee into Middle Alabama. There were numerous shallow lakes and sluggish streams flowing mainly from the north or northeast. The shallow water gradually changed to marsh, and impenetrable jungles covered the country; a heavy, hot, stifling air brooded over the whole, and a dense mass of forest and marsh vegetation, of which the human period gives no example, accumulated the material for the coal-beds.

This region was immersed under water and raised again a multitude of times—in some places at least a hundred. A small change of level and a sudden flood from higher ground would sweep all this dense mass into heaps and cover it with water and mud before it could decay. The great feature of this age of the world, which must have lasted a very long time, was the vegetation and its sudden burial so many times in succession. Had there been a human being present to note this splendor of development in the plant world and its repeated ruin, it must have seemed an utter confusion and waste. If this material, however, had not been so stored up, one of the principal means of human discipline and development would have failed in our century and the times to come, and the fate of mankind would have been greatly changed.

Previous to the coal-making period in the last part of the Palæozoic, or ancient time, the first representatives of the second and higher order of vegetable forms appeared. The Phenogams were first represented by a tree belonging to the *Conifer* tribe, which includes the pine and other cone-bearing trees, and they flourished to a considerable extent during the coal-making era. Another class, somewhat resembling the palm, called Cycads, was introduced during the course of that era. After its close the conditions of life in the air were much changed.

The composition of the air was now different. The first mountain-making period came on, and probably the climate was very materially changed in temperature thereby, for raising the land lowers the temperature of the air.

It was indeed a long time before the mountain-making was complete, but that accomplished, all the circumstances had become so entirely different that the old vegetation which could not accommodate itself to the new relations died out; but it was still longer before distinctively modern forms became the ruling feature.

Accordingly, the first series of rocks after those of the coal formation still show a strong likeness in vegetable forms to those of the coal period. In the first two eras of the Mesozoic that follow this first series—called the Permian—the cone-bearing species of trees increase and grow more modern, and most of the older families represented in the coal-beds disappear; but in the last of the three eras of the middle period the forms now existing were very largely represented. For the first time oak, maple, willow, and other representative forest and fruit trees appear. As animal life, large and small, in forms similar to the present, began to abound on the land, among which were birds, we may suppose that the seed-bearing grasses were also introduced in that period.

In the Tertiary there was a vast increase in the variety and modern character of the vegetable forms. It is probable that the Upper Valley, far west of the Mississippi, and even of the Missouri, was covered with vegetation more or less luxuriant, for a sub-tropical climate reigned even far up toward the pole. The rose, the whortleberry, and various other flowering shrubs of that period have been found. The earth began to deck itself in all the beauty of our present warm regions, and insect life swarmed among the flowers. The modern era in plant life had fully opened.

Thus we find that the lowest forms of the lowest class of vegetable life were early developed in the most ancient seas and probably in extraordinary abundance; that lichens and mosses probably soon came to cover the early continents to which all the higher classes of the lowest division of plants—the flowerless Cryptogams—were added as the coal period approached. The cone-bearing trees were also introduced before the age of coal. They were the only representatives of the Phenogams or true seed-bearing plants, and, indeed, the first true trees of ancient time. The Cycads were added in the latter part of the coal era. These were Phenogams, in form resembling palms, but fruiting like Conifers. These were both among the lowest of the higher division of plants.

Ferns, Conifers and Cycads chiefly ruled the Middle Period, although the more perfect modern trees and plants came in before its close. The Middle Period is called, botanically, the "Age of Cycads," for they were then extremely numerous, but steadily diminished in its closing ages until in modern times there are comparatively few and these are confined to tropical regions. With Cenozoic time were rapidly introduced the most perfect vegetable structures to supply the wants of ripening animal life.

The part vegetable life has played in the processes of storing the Great Valley with materials eminently serviceable to man has been therefore large and most important. The best and largest supplies of *iron*, the vegetable kingdom has assisted to accumulate. It furnished the base of supplies to the animal life that has produced near two thirds of the rock in the Valley—the limestones—and, in some minute forms, called Diatoms, formed rock of considerable extent. It has supplied much of the petrôleum and all the coal with which the Valley is made so eminently rich, and has crowned its long list of great services by furnishing a surface soil of unrivalled depth and value over the most of the wide-spreading bowl. Its modern forests, since the Glacial period especially, prepared the country for primitive man, and give to civilized man no small store of wealth.

That the vegetable and animal kingdoms form the two harmonious sides of one system of life is, finally, noticeable in this, that the life force in animals uses the oxygen of the atmosphere as the chemical agent for preparing its building material and rejects carbonic acid gas; while in vegetables the contrary is true, oxygen being rejected and carbonic acid gas being stored in the form of woody fibre.

CHAPTER VI.

ANIMAL LIFE IN THE VALLEY, ANCIENT AND MODERN.

The Life Force gained many and important ends in the comparatively narrow limits of the Vegetable Kingdom. In the plan of animal life several principles appeared that vastly raised this class in the scale of being, and left open the most wonderful possibilities to progress. In the very lowest animals there was a feeble dawning of a new individuality in sensation, in intelligence, and in the power of self-control. At the first there was but the faintest glimmer of these, and sometimes they were not all united in the same animal. It is sometimes very difficult to tell whether a structure is vegetable or animal, so slight is the space that separates the most sensitive organization among plants from animals having the least vitality.

But sensation was to be gradually developed until it became exquisitely perfect in the elaborate *nervous system* of the highest sub-kingdom of animals ; the capacity of self-motion was to increase into the most remarkable powers of voluntary physical force; and intelligence was to ripen until most phases of the supreme mental attributes and capacities of man had been shadowed forth more or less completely, though in every case fragmentally and in limited development; and, finally, by a vast leap, all these qualities of intelligence, freed, as to the race at large, from definite limitations, were to be concentrated in the Ideal Animal.

There is a world of suggestive mystery in the gradual development of the animal frame until some of the animals came to possess physical parts closely resembling man's; and a still greater mystery is the instinct and intelligence so like, and so unlike, man's bestowed on the different classes of animals. In each animal these higher gifts are very perfect so far as the special ends of its life can be served by them. There they cease. A single strongly marked quality belongs to each race with all the intelligence necessary to a successful career in such a character. There the resemblance ceases. The animal has no such reserve of unused powers and unlimited capacity of development, in a thousand ways, as are seen in man. There is a breadth and reserve of force in the higher qualities of the man that destroy the idea of his true and close relationship to the animal world. The most intelligent animal has but the *shadow* of the man's mental compass outside the range of its physical instincts. It is often a dense shadow, but, in the end, is nothing more. What mystery of origin and destiny lies behind these real physical, and instinctive and shadowy mental, relationships? What is man that immeasurable geological time should labor so strenuously and constantly for him, and that all organized nature should bear the broken and shadowy fragments of his image?

There are five great types or divisions of animal life, regarded as to the plan of their physical structure—Protozoans, Radiates, Mollusks, Articulates and Vertebrates. The first four are called Invertebrates. Most of the larger and more important and perfect animals belong to the last class—Vertebrates. The lowest class, Protozoans, are very simple, almost formless and jelly-like in structure, with no nervous system, often no mouth or stomach or permanent limbs. Whenever these are required they are extemporized for the occasion. They are usually extremely minute. They are commonly inclosed in a shell, and the substance of the animal is protruded to secure food. The lowest class of these are believed to have been introduced the first of all animals, although the absolute proof seems, as yet, wanting.

The Radiates are formed on the plan of a flower, similar parts spreading from a common center. They are very often permanently attached to the sea bottom, or rocks, brilliantly colored, of most graceful forms, and must have caused the early sea bottoms, when they were most numerous, to resemble a flower garden. Many of the corals were radiate. Most, though not all, were inclosed in some kind of shell. They were extraordinarily numerous in ancient time, and their shells contributed very largely to the making of limestone rock. They had, for the most part, no nervous system, and their mouths were surrounded with tentacles, or a kind of claw, with which they seized their food.

Mollusks are soft-bodied animals, with a nervous system of scattered masses. The oyster is a Mollusk, a shell being essential to the protection of the soft baggy body. They often had various appendages, serving as arms or feet. They are very numerous in the Palæozoic rocks.

Articulates are jointed animals. Crabs, worms, and insects are of this class. The joints are in the skin or covering, the internal cavities extending continuously through all the joints. The nervous system is below the stomach and other cavities, but has a ganglion, or bunch, in each segment. Articulates have constantly increased in numbers from their first appearance to the present time.

Vertebrates have a jointed internal skeleton with a continuous cavity through the bones of the back, for the large nervous cord, and other cavities for the various instruments of a highly organized life below or in front of it. In the vertebrates the head is carefully elaborated and with more pains as the animal rises in rank until, in man, it fully dominates and controls the whole body, which is kept as erect as a tree on a very narrow base, yet with admirable powers of locomotion. There are four classes of Vertebrates—Fishes, Reptiles, Birds and Mammals. Fishes are the lowest class and have no lungs, air bladders supplying their place, and, as well as reptiles, are cold blooded; but reptiles usually have lungs—except one division of them, which has the air bladder in early life and lungs at a later period. Birds and mammals are all warm blooded and of a higher style of structure and vital organization.

Protozoans, Radiates, Mollusks and Articulates were introduced in very early geological times, and, as it would seem at the first glance, nearly together; but there is much reason to believe that the first species whose stony structures have been preserved in the lowest Palæozoic rocks were preceded by a long series of species lower in rank, and whose fragile shells could not be preserved in the metamorphic rocks, or those which were very much transformed by the great heat and the active chemical forces of the earlier times. Much limestone was found in those periods, which, probably, as in later times, was composed chiefly of animal shells, and a part of the carbon found in great quantity in various forms in the Azoic rocks is thought to have been produced, partly, at least, by the oily parts of animal bodies.

The first animal forms distinctly preserved were of the lower classes, but not from the very lowest families, and not usually the lowest species in their respective families. There is, however, no real exception to the rule that a steady general progress in the rank of animal forms is found in the rocks, from the lowest that contain them at all to the highest. The forms found in any system of rocks are higher in organization than in the system of rocks next below, and not so high as in the system that follows. All these, and various other observations, furnish fairly good ground for thinking that animal life was probably introduced by its simplest forms which have not been preserved.

Twenty thousand species from the Palæozoic rocks have been described. It is probable that large numbers will yet be added, and that multitudes were too slight in organization to be preserved, or too unfavorably located to become known to us. Yet, a general impress was so distinctly given to the whole life of each age by the marked features belonging to it that a practiced eye can readily tell from the sight of a few genera whether they belong to earlier or later geological periods from the degree of *finish*—the coarseness or fineness of the workmanship. Very many classes of the simplest structure, have been in existence from first to last as orders, or great classes, but the species have been many times changed. Not a species now exists that was found in the coal period, or before it, or even long after it. The first division of recent time—the Eocene—contains but five per cent of the species now living.

There was, then, improvement from age to age. There was a difference in the length of life of species and in their extent. Some are found only in one particular deposit—the rock made in a single age—others extended through a succession of deposits—a number of ages; some are found only in a limited region and others extended to every region whose rocks are accessible to us. The introduction of higher forms, as time advanced, was a general and constant feature.

Invertebrate life is low in vital organization, in physical structure, and contains no animals at all comparable to the immense size of many of the later vertebrate animals. What they lacked in size, however, was far more than made up in numbers. The aqueous rocks of the Valley average nearly a mile in thickness and more than two-thirds of them, perhaps, are the product of animal life. How inconceivably vast must have been the number of animals whose shells could produce such huge results! How inexhaustibly active has been the Life Force! For it was that Builder which secreted the lime and silex in the shells of animals, collecting them from the water which held them in solution. When the animals died the shells became the sport of the waves and were mechanically or chemically crumbled, often to powder, to form every kind of marble and most other building stone. The layers extended, as a rule, a vertical mile beneath us.

The softer parts of animals and many vegetables are believed to have produced petroleum. If so, how inexhaustible may be the quantity of that useful oil! It was, in large part, this organic chemistry which enriched the soil of the Valley. The limestones are capable of being reduced to very fine dust and its constituents furnish rich material for plant structures. To animal life is due much of the agricultural wealth of the Valley.

The Ancient Geological Times drew on far toward the Age of Coal before the great vertebrate class of animals had a single representative. The lowest of vertebrates, fishes, were the first to appear. The earliest of this class that has been found was a kind of shark with an imperfect frame, in that it was not bony but cartilaginous. These first known species were not the very lowest in structure. This seems, so far as is yet proven, to be a law controlling the introduction of animals, and, with those who do not favor the strictest form of the evolution theory, is used as a strong argument for the theory of special creation as opposed to evolution. It is, however, supposed by many that the lowest forms were really first introduced, but that, owing to their having no hard parts they were not preserved. It is a question which can not, as yet, be definitely settled.

Fishes became very numerous before the coal, but it was not till about the middle of the Mesozoic Time, and long after the Age of Coal, that bony fishes resembling modern forms appeared. During the Age of Coal the still higher class of reptiles was introduced. The two divisions of this class are Amphibians, which have gills and air-bladders, like fishes, in their early life, but pass through a singular transformation afterward, develop lungs and become air-breathing land animals; and true reptiles born with lungs and having the air as their proper element of life, though they often pass much of their time in water. The amphibians were first introduced ; true reptiles were not found till after the Age of Coal. The earliest are known only by their tracks made in mud, dried afterward by the sun, and then covered and preserved by another deposit. The existence of the first birds known is discovered in the same way. These discoveries lend considerable probability to the supposition that the first animals of every class may really have been the lowest of their order whose organization was too slight be be preserved.

It thus appears that no animals with lungs existed before the coal period, the probable reason being that there was then too much carbonic acid gas in the air to permit the existence of animal life in it. All the coal treasured up during the Carboniferous Epoch in such vast quantities is believed to have been derived from the air through vegetable growth—the woody parts of plants and trees being chiefly formed of carbon received from the atmosphere. The air was purified during the coal age and rendered a suitable element for the development of land animals. Reptiles are, like fishes, cold-blooded, and therefore of low vitality, and could most easily endure an impure atmosphere.

It seems to have been only when the atmosphere had been purified by the embodiment and burying of so much carbon, and when the mountain system of the Alleghanies had been raised, that the conditions were favorable for the introduction of warm-blooded animals. As fishes seemed to give rise to reptiles by insensibly grading off certain of their classes in that direction, through the amphibian—living one half of its life as a fish, or an exclusively aquatic animal, and then becoming, by transformation, a land animal—which was followed by the related pure reptile, and *exclusively* land animals—so the last, or true reptile, seemed to give rise to tribes more and more like birds until the true bird appeared. There is really much to intimate that the succession of life has been a grand chain from first to last; and, if the links in many cases do not actually interlock, there are many apparent reasons for supposing that they did so in reality. At the same time the apparent suddenness of very great changes in life-forms shows, according to many men of science, indications of another and deeper Law of Introduction not yet firmly grasped. There is much that is now inexplainable on both sides.

Mesozoic, or middle, time was made remarkable by its vast numbers of reptiles and their huge and monstrous forms. It is called, in reference to animal life, the Age of Reptiles. They were sometimes *eighty feet* in length. There were monstrous sea-serpents, and a great variety of reptiles twenty to fifty feet in length, that sported about the sea-shores, that roamed over the land, the terror of other animals that often became their prey, or that fed on the foliage of trees. Others had immense wings like the bat. The evidence appears to show that the lands were covered with verdure and swarmed with animal life, of which it is probable comparatively few specimens have been preserved in the Valley.

Many of these monster reptiles have been preserved in the then rock-making regions of Kansas and Nebraska. The types, however, are the same in all lands; for, until after the greater mountain-making era, a warm-temperate or subtropical climate reigned far within the Arctic Circle, and great quantities of coal were made there and in various parts of the earth. The ancient genera and species of the animals of the sea had disappeared under the changed conditions, but more modern forms, for the most part, took their places, although some classes quite disappeared. There was a great development of insects, and birds, chiefly aquatic species, became numerous, while, about the middle of the Mesozoic, the class of vertebrates to which man belongs, mammals, or those that suckle their young, appeared. These gradually increased and became quite numerous toward the close of Mesozoic time, while reptiles as steadily decreased and passed over but few of their representatives to the Cenozoic, or Recent Period.

From the opening of that period there was a steady and rapid modernizing of animal life in keeping with the general approach to present conditions of continents, seas, and the atmosphere. Vast quantities of coal were magazined from the carbonic-acid gas of the atmosphere just before the Rocky Mountains were raised, or during that process, and the air was fitted to nourish higher and more intense forms of life. The shores of the Gulf abounded in immense whales, and in the rocks of the Western Valley elephants, rhinoceroses, and many other huge animals, which yet approached modern types, are found. One of the most interesting is the horse, which commences in the Eocene, or opening period of Recent Time, as small as a *fox*, and with *four toes.* As time passes the horse becomes larger, till it is gigantic, and, one by one, loses its toes till but one remains, the *nail* of which expands into the *hoof* as we now find it. It is an interesting revelation of gradual changes of form and quality. At the same time there flourished in the Valley hyenas, wolves, tigers, panthers, tapirs, hogs, camels, lamas, deer, hares, squirrels, beavers, and many other ancestors of modern animals of almost every class.

After the Glacial Period many of these disappeared from the western continent. It is somewhat curious to note that many plants and animals that first appeared in North America appear in the *next* age and group of rocks of the Old World, as if this was at some periods the *Old World* which colonized Europe as the then *New World.* There has been found reason to believe that the first land was raised along the north of the Valley; the Alleghanies are thought to be the oldest of the large mountain-ranges; and probably the upper part of the Valley east of the Missouri was the most extensive region whose rock-making and general structure was completed immediately after the Age of Coal. It would not, therefore, be surprising if it was ready for the habitation of some classes of animals before Europe, which continued to pass through important changes until late in geological time. Yet many of these animals, after a long career here, wholly disappeared while still continuing in Europe.

When the Glacial Period came on it is natural to suppose that the higher land animals retreated southward before it, and many of them survived it to perish before man could be benefited by them—as the horse, reindeer, and others. The animal kingdom continued, however, to be represented by huge and powerful animals, and to raise some of its classes in the scale of organization till man appeared. He was the Ideal Animal. Their progress had ever been (it is not proven how) from feeble to lively sensation; from few and confused parts and small measures of energy to many and highly elaborated sets of powers; from a few scattered fascicles of nerves to the extensive and well-protected system of the vertebrates; and the prone body and barrel form of the fish was soon excelled by a more and more erect head, while the long posterior body was shortened until only legs were left, while all the noble vital organs were raised in power and crowded into the front until the head was raised perpendicularly above them, and the fore legs were no longer instruments of locomotion but servants of the brain.

This uprightness, with the face and forehead on a perpendicular line with the front of the body, reached the limit of possible improvement in the frame, while the intelligence of man joined all the instincts and limited perceptions and passions of all the animal world in one mind, with undefined and fairly unlimited possibilities of power and growth, to which was added a class of faculties constituting his highest value—moral powers—the love of virtue and truth. As there can be no nobler frame in the animal world, so there can be no being essentially greater than man, in his highest and peculiar gifts, unless by an expansion of the same qualities. There was greater intelligence and power in the Principle that *planned* and *produced* the world, but since man can comprehend the work he must be of the same nature as the Workman.

CHAPTER VII.

GENERAL VIEW OF THE FINISHED VALLEY.

We have seen how heat and the loss of heat provided the inconceivable force in the crust of the earth required for the immense changes of every geological age. The *vastness* of the power is very evident, as also is the *restraint* laid on it. It was, so to speak, tamed and made to work in harness. What it has done shows how easily it could have become a destroyer instead of a builder. Yet it worked slowly, cautiously, never getting ahead of its chemical, mechanical, and organic associates. Chemical attractions and repulsions made and unmade rocks, and stored up minerals at the points where the forethought that guided volcanic force and the power arising from contraction designated, winds and waves, sun and storm, torrent and gravity made rock in the proper places, and the Life Force worked with unflagging zeal in vegetable and animal to supply the most useful rocks and to store the richest treasures. Finally, *cold* came to do a most important surface work and then retired, leaving the slow falling and rising of the levels, the waters, dews, rains, and the sun to re-arrange the drift, vital energy to re-people it with animal and vegetable life, and present it finished to man when he should appear.

We have now to observe its general features as completed. From north to south the extreme of its length is about 2,000 miles; the extreme descent through its center in that distance being a little over 1,600 feet. The descent is nowhere very abrupt, although about three fourths of it are accomplished in the upper part of the Valley, from the head of the Mississippi to the mouth of the Missouri. The very gradual fall from that point to the Gulf is one of the most important features of the Valley.

Its extremest width, from the heights of the eastern watershed to the crest of the Rocky Mountains, is not far from 1,600 miles. The western rim of the bowl is much the highest; about 2,000 feet in general along the east, though considerably higher in some places and lower in others; while the head waters of the Missouri are nearly 7,000 feet high; those of the Arkansas, 10,000; and of the Red River about 2,500. The descent on the west is very gradual, forming, for the most part, vast grassy plains, on which the steady change of level, though so great on the whole, is scarcely perceptible to the eye. On the east, the region inward from the mountains is much more broken, and, in part of West Virginia, Kentucky and Tennessee, a ridge of mountain is thrown westward, so that a northward slope is made to meet the general southward descent, in the bed of the Ohio. It is a ridge across the eastern center of the bowl which has prevented the extreme "washing" of the surface that has taken place west of the Missouri on the "Plains."

The whole of the united basins of the great central river and its branches, together with adjoining sections that naturally annex themselves to it by position and relations, cover an area of about 1,800,000 square miles—about the size of Europe without its colder and almost worthless northern regions and the poorer parts of Russia further south. The actual basins of the Mississippi and its tributaries cover an area of 1,256,000 square miles—it is often stated at 1,244,000, but that omits the delta. The adjoining and affiliated sections are the basin of the Great Lakes, which only a few feet of soil prevents from pouring its waters into the Mississippi, as it formerly actually did; the basin of the Red River of the North; and the Gulf coast, including the Valley of the Rio Grande, and, therefore, all of Texas, New Mexico, and Colorado, with large parts of the Territories further north. The length of the main river and its subordinate streams, the height of their head-waters above the level of the sea, and the area of their basins, with some other facts, are given in the following table from Humphrey's and Abbot's "Report to the Government on the Physics and Hydraulics of the Mississippi River."

RIVER.	Distance from mouth. MILES.	Height above sea. FEET.	Width at mouth. FEET.	Downfall of rain. INCHES.	Disch'rge of water from mouth per sec. CUBIC FT.	Area of Basin. SQUARE MILES.
Upper Mississippi	1,330	1,680	5,000	35.2	105,000	169,000
Missouri	2,908	6,800	3,000	20.9	120,000	518,000
Ohio	1,265	1,649	3,000	41.5	158,000	214,000
Arkansas	1,514	10,000	1,500	29.3	63,000	189,000
Red River	1,200	2,450	800	39.0	57,000	97,000
Yazoo	500	210	850	46.3	43,000	13,850
St. Francis	380	1,150	700	41.1	31,000	10,500
Lower Mississippi	1,286	416	2,470	-------	675,000	-------
Several small direct tributaries	-------	-------	-------	-------	-------	32,500
Delta of Mississippi below mouth of Red River	-------	-------	-------	-------	-------	12,500

This grand network of rivers supplies an internal navigation by steamboats of near 9,000 miles. The main stream is navigable from its mouth to St. Paul by large steamers—1,944 miles—and beyond St. Anthony's Falls 80 miles further, with 350 miles, on its branches in Minnesota and 220 miles on the Illinois River. The Ohio is navigable to Pittsburgh, 975 miles and that distance is about doubled by including the capacity of its branches. The Missouri is navigable almost 2,000 miles, and in high water 600 more. The Arkansas and the Red Rivers are navigable several hundred miles and the distance is doubled in high water. Several other streams add many hundreds of miles to navigation.

The regions of the Valley so reached are the fairest and richest for farming and mercantile purposes. The eastern and central parts of the Valley are extremely well watered, and the shore-line of the Great Lakes, the Gulf shore, and navigable streams emptying into it, altogether furnish for the

Valley basin commercial waterways fully 15,000 miles in length. The basin of the Missouri includes nearly five twelfths of the surface drained by this network of streams, and it contains some of the best, as also of the poorest, land in the whole Valley.

The Gulf Slope, or the Lower Basin, except the immediate basins of the Mississippi and its branches, failed of the special provision made for the upper basin; the drift is largely confined to the northern and central regions. Yet the rock underlying the Gulf States is nearly the latest made, and therefore softer, as a rule, than that formed in earlier times; its climate forces vegetation more, and therefore secures more vegetable mould in proportion, while its long productive seasons and more equable heat give it a monopoly of many rare and valuable products. It is also more abundantly furnished with moisture than most other parts of the Valley.

About two thirds of the whole area lie west of the central stream; about one half of that region has incomparable advantages in soil, climate, and situation, leaving nearly one third of the whole area of the Valley less favored in the same way. But this varies largely, nearly all of it having *possibilities* of a high order, which will be ultimately developed. A portion of the entire surface, probably equal to the whole of Europe—Russia, Norway and Sweden excepted—is beyond measure rich in agricultural capabilities.

From the Missouri River westward are treeless plains. For six hundred miles Eastward of that river in the upper valley there is a large proportion of prairie; forests naturally growing only in rare spots and bordering streams. There has been much speculation as to the causes of this natural treelessness. The level or rolling eastern prairies, at least, were formed by the drift which filled up and evened off the inequalities of the rocky foundation of the Valley. Over this region, or large parts of it, shallow lakes continued for long periods, and after a time for a large part of the year the water in them was stagnant, vegetation of the kind peculiar to such ponds rapidly filled them up and formed a deep soil, or loam. The inequalities now peculiar to the surface, were due partly to the underlying rock, partly to the unequal force of the currents distributing the drift, perhaps partly, where the rolling is regular, to the measured motion and rush of waves on a large and moderately shallow inland sea stirred by powerful winds, but perhaps more to the action of the waters in draining off, or to subsequent flood by the rains and melting snows, as is very distinctly shown by the ravines formed by the rush of water or gradual washing between high and lower levels.

It is believed by some that the soil of the prairies was so largely formed in this way under stagnant water, as to contain qualities—chiefly acids of various kinds—unfavorable to the growth of trees, and that they can only take root and flourish in it after it has been opened by cultivation to the air, or when they have been expelled by washing and drying in the course of many centuries under favorable circumstances. Therefore, they remain treeless until a forest growth is introduced and cared for by man. Others find the cause in the degree of *fineness* to which the material of the soil has been reduced, and see confirmation of the theory in the growth of timber on pebbly knolls and on the uneven lands bordering streams, or in the bottoms kept damp and light by vicinity to moisture but where water does not lie long enough to pack it hard and smother the roots of trees. Others have believed prairies to be caused by the annual fires made by the Indians for centuries past.

None of these theories appear capable of explaining all the facts, although it is highly probable that each has its place and degree of influence in the absence of forest vegetation from so large a part of the Valley. A more general and powerful cause has been looked for to explain the treelessness of large regions on every continent. The course of mountain chains, and their relations to the cloud-bearing currents of the atmosphere appear to furnish this general principle. Accordingly, general fertility, forest regions, and deserts, depend on the location of mountains and their effect on atmospheric currents that take up and distribute the vapors of the sea.

The mountains of the west coast of the United States, rising high and cool into the air and above the clouds, condense the vapors that form them, and, for the most part, little rain from the Pacific falls east of the first, or most westerly, range of the Rocky Mountains.

The eastern and central parts of the United States are therefore supplied with moisture from the Atlantic, and the larger measure of this comes from the Trade Winds—steady currents that blow across from Africa—within or near the tropics. These winds enter the opening between North and South America, and are neither deprived of their moisture by the low range of mountains in Central America, nor permitted to pass across into the Pacific except in part. Their general direction is changed by the form of the continent there and the current is set northeastward. Taking up large quantities of moisture from the Gulf they spread over the low-lying Valley, which opens itself in that direction to receive them.

The shores of the Gulf are heavily watered, and the central stream of rain-laden currents sets broadly in the general direction of the Alleghanies, nearly northeast. Eastern Texas and part of Arkansas are well watered, but the western line of the heavy rainfall crosses the Mississippi and Western Kentucky into Indiana. As the rain clouds thin out more and more toward the west of the Valley, so do the natural prairies increase. Illinois has a large increase on Western Indiana, they increase westward in Iowa and Eastern Nebraska, and at length only the narrowest strip of forest is found on the plains along the streams, and even these almost entirely disappear before the mountains are reached.

As this general principle accounts for the large amount of moisture in South America, as also for its treeless Llanos and

Pampas, the Steppes of Russia and Siberia, and the Deserts of Asia, Africa and Australia, it may be considered a true one. It is confirmed very emphatically by the measure of the rainfall in different parts of the Valley. The table of rainfall for the subordinate basins of the Mississippi shows that the Valley of the Ohio receives, on the average, more than twice as much as that of the Missouri. It it quite certain that the character of the soil has something to do with the distribution of the prairie and timber east of the Mississippi, and even the Missouri, yet it seems an incidental influence compared with the more determining and decisive point of the average measure of rainfall.

There is, also, as the rain thins out westward, an increasing inequality of rain (as an average) for the different seasons of the year. The law regulating the winds and the clouds (the details of which would be too lengthy for this place) cause seventy-five per cent of the rains that fall on the Western prairies, or "plains," to occur in Spring and Summer when most needed for herbage and agriculture. A nearly even distribution for each season, as in the Atlantic regions, would be fatal to agricultural success. A favorable form of the structure of New Mexico and Colorado increases the amount of moisture they receive.

It will thus be seen that the form of the Valley and its relations to the Gulf of Mexico, the high relief of the coast of Mexico and Central America, and the relations of the Gulf to the Atlantic Ocean have a most important influence on its winds and rainfall, and thereby on the remarkable fruitfulness of its soil. The general course of the winds during the productive months of the year from the South, or warmer latitudes, also gives a semi-tropical character to the climate of the Valley far to the North, and extends the productive regions of the interior of the continent almost into the center of British America. The depression in that direction to the Arctic Ocean also renders the Winters more severe, while it extends further South the region of the most useful grains.

Most of the relations of the Valley, within and without, are admirable. Its farthest extremities are brought into relation with the center and the South by the Missouri and Ohio; the long string of the Great Lakes connects much of its most fruitful region with the East by the break of the mountain chains in New York, and the Gulf gives still more perfect and immediate commercial relations with the outside world. The southern Valley is compensated for its failure to receive a general covering of the valuable drift by its greater humidity and warmth and excellent commercial position, while the central and northern parts are indemnified for their isolation in the center of the continent by their extraordinary fertility, singularly favorable climate and double system of waterways, and their vast levels invite the extraordinary development of railways they have recently received.

With these favorable circumstances is joined another of singular consequence to the speedy unfolding of all its advantages; an unusual readiness to open its various sources of wealth in all their magnitude. The seasons are long and the climate favorable to perfection of vegetable growth, while the evenness of the surface, the softness of the soil and its freedom to so large an extent from forests, promote speedy, excellent and large returns to the agriculturist. Its minerals lie at once near the surface of the earth, and, usually, near the readiest and cheapest means of transport. Various favorable conditions invite and reward enterprise in industry, manufactures and commerce to a degree unknown *together* in any other section of the world. Nature is here in her freest and most open-handed mood from whatever point she is viewed.

CHAPTER VIII.

THE MINERAL TREASURES OF THE VALLEY.

The highest kind of power known to us is that which belongs to mind; that which organizes matter into living forms and so confers on it new offices and capabilities, is next lower, beneath which is the power residing in chemical attraction and repulsion; the mechanical force or *weight* of matter—which measures the power of the attraction called gravitation—being the lowest. Intelligence has evidently superintended the operation of the lower forms of power, from first to last, and probably they are merely the *modes* in which the Supreme Intelligence displays its energy.

The earth has ever been a vast chemical laboratory. Mental and organic powers are scarcely more wonderful or mysterious than chemical force, and they seem dependent on it, in some form, for each of their innumerable manifestations. It is to this active agent and its extraordinary properties that the vast mineral accumulations of the Valley are due. It has acted with the greatest vigor where heat and moisture were abundant, and therefore its most stupendous deeds were accomplished in the early ages of the World, when the crust was thin, when the internal heat of the earth could make itself powerfully felt on the surface, and while the surface of the Valley was largely covered with water. The largest amount of mineral stores was usually accumulated at the point where these two elements met.

Most of the metals have been collected in large quantities by means of water heated by volcanic, or by chemical, forces and therefore along the lines where volcanic energies broke out. Yet, the largest accumulations of iron, the production of coal and perhaps of lead, did not require, apparently, any great degree of volcanic heat for their immediate deposit. Here the more remote and gradual operations of heat led to the final result. Chemistry, as well as vital force, has had a graduated development to a certain extent. It had its special periods for the accomplishment of various tasks. Rocks of a certain composition could only be produced under certain circumstances, and different classes of metals must wait their turn to be gathered in large masses. There was a constant succession of services performed by chemistry for our Valley through the geological ages.

Iron is diffused very widely and abundantly through the rocks under many combinations. It is thought by some that the proportion is still larger in the center of the earth and even that it may constitute two thirds of the mass of the earth. The composition of the meteors—mostly iron—that have reached the earth from other spheres suggests this view, in which case the earth may be considered as *ballasted* with iron, and to have embodied in its true crust the larger quantity of its various other and lighter mineral substances.

Iron was specially abundant in the Azoic and primary rocks and the largest and purest beds date from that time. It is thought that beds of iron are always due to the chemical action of decomposed vegetable matter. The deposits of iron now being made are all accomplished in this way and it seems probable that it has always been done in the same manner, and that masses of this metal are both the evidence and the measure of the vegetation of the time and place of deposit. In this case evidence would be furnished of an extreme abundance of plant life on what have been usually called the Azoic rocks. The largest beds of iron known, and of a purity and excellence nowhere surpassed, lie along the south shore of Lake Superior. They are in the group of rocks formed immediately before the first of those known as Palæozoic, which contain the first well-preserved forms of ancient animals. At that time this region was the southern shore line of the early continent.

Iron was more abundant, or more concentrated, in the early or Archæan rocks, and probably the vegetation of the time was chiefly seaweeds, lichens and possibly the coarse vegetation of marshes. The rains and streams leached out and washed down the iron of the surface rock of the land under various combinations, and the decaying vegetation of the bogs and marshes of the shore caused it to be deposited in great abundance and purity at these points. It is said to equal in quality the best ores of the Old World, while the largest single deposits of that continent would be mere patches compared to the extent of this. The area of the Lake Superior mines is about 150 miles in length from east to west by a varying breadth of from six to seventy miles. Stretching along the shore of the lake the ore is peculiarly well situated for cheap and easy transport to the vicinity of the best and most abundant coals of Ohio and Pennsylvania.

Iron, apparently of the same age, is largely developed in Missouri—the very center of the Valley, and not distant from suitable coals for working it. Iron of this age is also found in Arkansas, in New York and New Jersey. Beds of it formed in various ages, and especially in the great Coal Age, are found in most parts of the country and very frequently in the neighborhood of coal areas. Although not so pure or so high in quality, it serves ordinary purposes well and is obtained and worked at a minimum of expense.

The use of iron is a measure of comparative civilization and enterprise. The iron of the Valley is far more important and useful to it than all the gold and silver mines of the whole world would be. The abundance of this valuable ore indicates the high rank this region is to take as a leader of future civilization.

The first group of rocks that contain animal remains hold veins of copper of great purity and unusual abundance in the

Lake Superior regions. This metal appears to have been collected in the cracks of the rocks under the influence of heat and certain chemical conditions. It is found in smaller quantity in Tennessee. The Valley now furnishes a much larger quantity than is required for use in this country.

Still higher series of the ancient rocks contain lead which is found in large quantities in a wide region covering corners of the States of Wisconsin, Illinois and Iowa and also in Missouri. Its deposit was not, apparently, due to volcanic action, but a special chemical condition of the time and regions caused it to collect or crystallize in the fissures of certain rocks. Great quantities of hard, beautiful and useful building stone, mainly from various limestone formations, follow in the ascending series and are very abundant for all common purposes through the upper Valley.

About midway between the earliest Palæozoic rocks and those belonging to the Carboniferous, or Coal-making Age, lie the series of formations in which was stored vast quantities of salt. All this is not confined, however, to one group of rocks. In different countries it has been made in different ages and the process is still going on in some places. It is only necessary that sea-water be confined in a bed so shallow that it may evaporate, when it deposits its salt. If this occur on the sea margin where, in high tides and storms, the salt water may be forced in now and then to evaporate as before, or if there is a very slow sinking of the surface for a long period to furnish occasional supplies to the salt-flat, very large quantities may be treasured up. When this is covered with formations of other rock, it is preserved.

If the salt was not formed under conditions to crystallize it into rock and the overlying formations are porous and admit water to it, salt springs are formed. The salt-bearing rocks of Michigan cover 17,000 square miles. These are found in Kentucky, and in various parts of the Valley, so that there is an abundant supply.

In the next higher series are the rocks which, in the northeastern part of the Valley, store up vast quantities of petroleum. This is believed to have been distilled by a suitable chemistry of these rocks, in the layers below or those above them, from vegetables and the soft parts of the bodies of animals. Some have thought it a pure mineral product—a combination of gases ascending from the heated regions of the lower rocks—and that the process is still going on. In this case the supply would be still more inexhaustible, but the general opinion is that this oil is a product of the Plant and Animal Kingdoms. Most of the rocks contain it in greater or less quantity. It is found in paying quantities only in porous rocks. This is sandstone in Pennsylvania and blue limestone in Kentucky. It added largely to the mineral wealth of the Valley.

But perhaps the most valuable mineral product of this region is its coal. It is necessary in vast quantities for working iron ore on a large scale, and it bears the most important relation to the wonderfully effective activities of modern industry. Great Britain has about 12,000 square miles of her territory underlaid with coal. It often lies very deep, and is there difficult and costly to raise; but it has made her the foremost nation of the world. The machinery used in manufacturing in Great Britain does the work of fifty million persons besides those employed to control it, and coal applied to transportation enables that country to develop trade and commerce to corresponding proportions. In the last seventy-five years, therefore, Great Britain has led the world in industry and commerce, and become the center of wealth among civilized nations. By means which find operative power in her coal she has acquired possessions and established colonies in every part of the world. Her aggressive spirit has been turned into useful channels, and she has been one of the most effective agents of civilization.

By her facility in manufacturing she *overflows* with this kind of productiveness and finds her interest in *free trade* with all nations. She has long been able to almost flood the markets of the world with her goods, and undersell many of the most diligent and ingenious people in the special products of their industry in their own markets. Her commerce whitens every sea, she is mistress of the ocean and the common carrier of nations. "Her merchants have become princes." An association of them acquired political possession, in Southern Asia, of a region ten times the size of her home islands, containing native inhabitants nearly seven times as numerous as she could count at home, and these two hundred millions possessed the accumulated wealth of a very ancient civilization, the prolific resources of a tropical climate, and the commercial advantage of being surrounded on three sides by the sea.

Her colonies, sharing her intelligent and enterprising spirit, tend to become nations; the mother country wisely sustains and protects them in feebleness, and when strong allows them a free and independent development, finding the greatest profit in trade with them and in the markets they supply for her wares. Were the forces of civilization derived from the coal beds of England, Scotland and Wales now subtracted from the world its loss would be beyond computation.

But the same Anglo-Saxon race rules the Mississippi Valley and owns the coal to which that of England is a trifle. There are three great fields, most of whose deposits lie wholly within the Valley, the remainder being near its rim. The Appalachian coal field, stretching from New York to Alabama, underlies 60,000 square miles. The Central or Illinois field, extending into Kentucky, is nearly as large. The Western field, including parts of Iowa, Nebraska, Missouri, Kansas, Arkansas, and extending, with some breaks, across the Indian Territory into Texas, underlies an area of nearly 100,000 square miles, and the coal of more recent formation, near the base of the Rocky Mountains, in Colorado and Wyoming, extends under about 15,000 square miles. Michigan has also a field, which is comparatively thin, of 5,000 square miles.

It is not accurately known how much of this may be so impure or thin as to prove unprofitable to work, but so much is known that it may be confidently asserted that about 150,000 square miles of it in the Valley will yield excellent results. All Europe is estimated to contain but 100,000 square miles of coal. To this is to be added that where the American coal is the thickest and most condensed, it has been generally elevated above the drainage in hills and mountains, that almost everywhere in the prairie states it is contained in the highest or surface series of rocks, and usually above the drainage valleys. It is also more accessible than much of the European coal to carrying agents. By these two circumstances a vast expense is saved in working it.

This wide-spread extension seems a foresight of the broad activities that, by means of it, were one day to cover the vast Valley. A glimpse of the inexhaustible quantities and boundless wealth included in this resource of the Valley may be caught by the miners' estimate that a square mile of coal one foot thick would yield 1,000,000 tons. The beds, in vertical thickness, vary from two or three feet to twenty and thirty, and sometimes even more. No single layer is more than a few feet in thickness, but many often lie over each other, in some cases even to the number of sixty or seventy. It is not easy to imagine any activity so great as to exhaust the motive power residing in the coal of the Valley, and every ton of coal represents a large amount of activity producing wealth or comfort.

Large quantities of the precious metals are stored in the western border of the Valley, from the head waters of the Missouri to Texas. These were chiefly collected in the crevices of the rocks, or scattered through quartz rock during the elevation of the great Rocky Mountain system, and unknown, but certainly large, quantities are yet to be obtained. The supply of silver is considered practically inexhaustible. But iron and coal are far more necessary to the permanent wealth and colossal development of a people than gold and silver, and of those there is most liberal provision. In these respects all apparent possibilities of need are richly provided for.

CHAPTER IX.

AGRICULTURAL POSSIBILITIES OF THE VALLEY.

The general surface of the Valley of the Mississippi, through the direction and moderation of its slopes, is characterized by a broad and grand simplicity. By geological formation, by relations to the outside world, and by peculiarities of climate there are three sections. These are the Ohio Valley and the southern and western watershed of the Lakes, to which geological, agricultural, commercial, and manufacturing affinities join the Upper Mississippi and its system of drainage; the Missouri Valley, including that of the Upper Arkansas ; and the Gulf Slope, including all the Gulf States and the Lower Mississippi Valley. Yet, nowhere do dividing lines approach the character of barriers. The whole is so tempered and melted together by the interlocking of the streams and slopes and the characteristics of soil, temperature and rainfall, as to form a broad and grand whole. The lake system on the north and the Gulf on the south both enter as elements of supreme importance to the general interests of this fortunate region.

Internal commerce is provided with remarkable facilities. The heights of Minnesota, of the far Northwest, and of Western Pennsylvania are joined by three grand arteries of navigation in the centre of the Valley, where the mighty stream of the Lower Mississippi invites intercourse with the south and the outside world. The singularly favored Upper Valley would have suffered seriously in many ways but for the system of Great Lakes and their eastern relations. While the direction of its main slope and the Ohio and Upper Mississippi Rivers suggest its relations with the south, the break in the Alleghanies through New York, the vast connected links of the lakes and their outlets, give the invitation to close commercial relations with the Atlantic Coast in the same latitude and distinguish the whole northern slope as highly for the most modern times as in the early and later geological ages. The lakes and the rivers insure an always important commerce.

These water facilities for commerce, however, seem to be overshadowed at present by another ; its smooth, soft surface and wide levels remarkably adapt it to the development of the railway system. This was so readily and cheaply accomplished, was so accommodating to the purposes and wants of the time, that the water-ways of the Valley were almost abandoned. Commercial facilities and the massing of coal, iron, and other useful metals in the Ohio Valley and Lake regions encourage manufactures in a way quite extraordinary. The presence of a large population, the position midway between the two oceans, the cheapness of material from its nearness and abundance, and the ready facilities for cheap distribution—all which must have a great effect to cheapen the price of the articles manufactured—adapt the Valley singularly to this form of industry. It is the natural center of a great people. It has ready relations with civilized Europe by Eastern ports, and with the teeming millions of Asia by the Pacific Coast. It has the closest and most important relations with the West Indies and tropical America across the Gulf and the Carribean Sea from the mouth of the Mississippi and the Gulf ports and by the Orinoco and Amazon Rivers and the future ship canal across the Isthmus of Panama. Under all these stimulants the Valley must develop, in time, immense activity in numerous branches of trade. No region can expect to approach it in greatness in these respects, when its capabilities are fairly unfolded.

But however great the Valley may yet become by commerce and various industries from its natural facilities for them, its advantageous relations and its position, its agriculture must always be most prominent and profitable. It is the true home of this industry. All the Geological Periods worked intelligently and continuously to concentrate here the rocks that should supply the necessary earthy and chemical materials for the formation of a durable soil, and later ages took care that they should be finely pulverized and well distributed. With this foundation agriculture may be developed to any desirable extent. This industry is the base of the social and business structure. Man's first and constant necessity is food. With an insufficient measure of this in any region all other activities must be put in motion to collect it from more favored localities. Wherever it is produced in unrestrained abundance the wealth of other regions must flow.

Branches of manufacture, lines of commerce and trade, and the valuable products of mining are subject to fluctuations because they may be over-worked or find competitors with great readiness. As a source of income they have not the steadiness of agriculture for this reason, and because they deal more largely in the supply of the secondary and artificial wants of mankind. These, indeed, by habit, seem soon to become necessaries of life; yet, when financial pressure arises the primary demands of life are undisturbed, while these acquired wants retreat into the background, and disaster and distress spread through the classes whose income depends on the prosperity of the industries which supply them. No people can be poor with whom the most solid fruits of the soil are abundant. Experience soon shows them that they can be comfortable on what the earth produces, and whatever excess of this produce remains to them is fairly sure of a market.

This excess of agricultural products in the Valley can scarcely be said to have any conceivable limit. The measure of results from cultivation of the soil here has been as yet ridiculously small compared with its absolute capacity, although the grains annually produced have long been counted by thousands of millions of bushels. The per cent of surface actually devoted to growing crops in the most thickly settled and oldest parts of the Valley is, perhaps, in no case over 20 to 25, and much the larger part of the surface has been settled recently and thinly, or not at all. Some recapitulation of the geological origin and quality of the soil of the different sections will best convey a general idea of the agricultural possibilities of the Valley.

The eastern Valley north of the Ohio, the upper Mississippi, and the region some distance west of the Missouri in the same latitude to the southeastern part of Dacotah was, with some adjoining parts, the original floor completed and raised at the elevation of the Alleghany Mountains, about the beginning of the Mesozoic, or Middle Period. It had been carefully protected during the long Palæozoic Period, which included about two thirds of geological time, and had been extremely abundant in the shell fish whose limestone coverings had been secreted from the waters by the Life Force in these animals. For this reason the shells were easily broken up into fine dust when the animals died, and limestone rock was principally composed of this material. When not hardened and compacted by heat, great pressure, or some peculiar chemical cement this limestone would be dissolved by "weathering," or crushed by the vast glaciers of the Great Ice Age into the very fine dust suitable to be taken up by plants to aid in their structure.

The presence of animal and vegetable life in such profusion in this part of the Valley for such immense periods of time also collected in the forming rocks most valuable material to enrich vegetable growth when they were worn down and spread abroad as soil. Add to this, that on the north, much of the east, some spots through the center, and generally over this part of the Valley before, after, and during the Coal-making Age, vast quantities of mud, gathered from the finer material of different rocks by atmospheric influences and mingled with the remains of vegetable and animal life of the land and marshes, formed vast layers of loose, shaly rock. This was "weathered down" on the hills, or ground by the ice, and helped to furnish rich supplies for vegetable growth all over the Valley, but more especially over the prairie States and in the river bottoms.

As the finer, lighter and richer parts of this material remained long in suspension in the waters during the Champlain and Terrace Epochs it was largely diffused over the surface of the northern Valley. The shallow lakes on the prairie levels received and deposited it. Sometimes, by the damming up of streams, wide-spreading lakes would be formed where this material was brought in such abundance as to fill them with this valuable Loëss, or bluff soil. The shallow lakes became marshes and gradually filled up with a rich loam supplied by its decaying vegetation. Where the drift was not lodged, or where this fine surface deposit failed to be laid or was washed away from the surface, enough was mixed with the gravel to form a fine soil, or the shaly and limestone rocks of the hills were dissolved by the atmosphere to furnish plant supplies—as in Kentucky and Tennessee.

This preparation was completed by long centuries of vegetable growth and decay, by the life and death of innumerable herds of animals, large and small. This formed a rich, often deep, surface mold which made the Valley a garden for productiveness when the Mound Builder or civilized farmer came to cultivate it.

This was the condition of the soil of the old "Northwest Territory," between the Upper Mississippi and the Ohio, of Iowa, most of Minnesota, Nebraska, North Missouri and the northeast corner of Kansas. Over all this region, to which parts of Kentucky and Tennessee are to be added, there is a boundless possibility of agricultural wealth and very little poor land.

The plains between the Missouri and the Rocky Mountains lay for long periods as a region of lakes and marshes; their rocks were soft and rich in material required for vegetation. It was very heavily washed down during the process of elevation, but still contains in places all the depth and richness of the soil of Illinois and Indiana, and the conditions of agricultural wealth in general if sufficient moisture were supplied. The Southern Valley, or Gulf Slope, was chiefly formed in later geological time. The Valley of the Lower Mississippi is largely filled with rich materials brought down from the upper Valley after the Glacial Epoch. The Cretaceous or chalk-making era laid heavy deposits which, though not chalk proper, appear to have been formed at the bottom of a deep sea from an ooze composed mainly of minute animals whose light shells produce a rock having excellent fertilizing qualities. The cotton of the south is largely raised on this belt. As the rocks of the extreme south in general are of comparatively recent formation, they are usually soft and fine. The washings from the land at the north, northeast and northwest formed much shale, or mud rock, that supplies a soft and fertile soil. Valuable fertilizing marls and green sand, shell rocks, lime, sandstones and clays are also found there. The coast of the Gulf back a hundred miles in Alabama, and still more, sometimes, amounting to two hundred miles further west, was formed in the Tertiary epochs just before the great Ice Age, and therefore in the latest rock-making geological times. The soil is consequently varied more largely in fertile qualities than in the other sections, but its rocks being mostly soft, the warm climate and abundant rainfall help to make the most of the soils they produce. Texas has a large display of cretaceous rocks and limestones, both of which, being chiefly of animal origin, are a fine base for fertility.

No region in the world can show a soil so carefully prepared, through vast geological times, with all the most valuable mineral and chemical supplies for plant-life, and these so well mixed and widely distributed, as that part of the valley which became permanently dry land early in the Mesozoic period; that is, comprising the original "Northwest Territory," and the adjacent parts west of the Mississippi and south of the Ohio. Its abundance naturally overflowed to a large extent into the southern basin, and much of the surface of the plains was washed down the same way. Thus the real possibilities of agriculture throughout the Valley, but especially in the northern and central sections, are wholly above estimate so far as real capacity of soil is concerned.

This is admirably seconded by the climate. The opening of the Valley to the south and the direction given to cloud-bearing winds by the high lands and plateaus of Central America and Mexico furnish the stimulus of heat and moisture required to call out these resources. The northern and western parts of the Valley are tempered by the great lakes, by winds from the north and the mountains, and a winter which wholly rests vegetation for several months in the year. This is varied through many degrees of latitude and longitude and by great differences of precipitated moisture, or rainfall, and various other circumstances. In the south there is almost tropical heat tempered by abundant moisture, by winds usually from the sea, by the Alleghanies on the northeast, and the elevations toward the Rocky Mountain plateau on the northwest of that basin. The position and the latitude, the relation of the Atlantic and the Gulf to the Valley, of the mountains, the lakes, and the depression north toward the pole, all tend to secure desirable features of climate, either to moderate extremes or to render them a special benefit.

Tables of temperature and rainfall, averaged from the observations of many years, by scientific observers, are here given. The average temperature and moisture of each section of the country during each of the four seasons, and also for the year, are recorded, and may be considered satisfactory as a general guide. It has become evident, however, to careful local observers west of the Missouri, that the extensive settlement of those regions in recent years is producing marked and most beneficial changes in the amount of yearly rainfall; it steadily increases as cultivation and treeplanting progress. The shock given to the atmosphere by railway trains and the influence of all the changes wrought by active settlement on its electric conditions are believed to be important agents in promoting an increase of rainfall where it was before often insufficient for all the purposes of agriculture.

TABLE OF TEMPERATURES IN THE UNITED STATES.

STATIONS.	ALT. *Feet.*	SPRING. °	SUMMER °	AUT'MN °	WINTER °	YEAR °
Toronto, Canada	341	41.1	64.8	46.6	24.5	44.3
Portland, Me	20	42.8	65.2	48.1	24.7	45.2
Portsmouth, N. H	20	43.2	64.4	49.0	26.6	45.8
Cambridge, Mass	71	44.3	68.6	50.1	26.2	47.3
Amherst, Mass	267	45.0	68.6	48.7	24.7	46.7
New York City	23	48.7	72.1	54.5	31.4	51.7
Albany, N. Y	130	46.7	70.0	50.0	26.0	48.2
Rochester, N. Y	506	44.6	67.6	48.9	27.0	47.0
Philadelphia, Pa	60	50.6	71.0	52.1	32.6	51.6
Gettysburg, Pa	600 ?	50.0	71.6	51.1	30.1	50.7
Washington City	78	54.2	73.1	53.9	33.9	53.8
Charleston, S. C	20	65.8	80.6	68.1	51.7	66.6
Pensacola, Fla	20	68.6	81.6	69.8	54.9	68.7
Vera Cruz, Mexico	00	78.0	81.5	78 7	71.9	77.5
Mobile, Ala	25	70.1	82.7	71.0	57.3	70.3
New Orleans, La	10	70.0	82.3	70.7	56.5	69.9
Galveston, Texas	00	78.0	82.5	70.2	53.8	69.4
Fort Towson, I. T	300 ?	62.4	79.1	61.3	43.9	61.7
St. Louis, Mo	450	54.1	76.2	55.4	32.3	54 5
Cincinnati, O	550	54.3	73.0	55.0	32.9	53.8
Hudson, O	1,131	49.1	70.2	48.4	28.8	49.1
Ann Arbor, Mich	700 ?	45.5	66.3	48.4	25.3	46.4
Fort Wilkins, Lake Superior	627	38.5	60.8	43.0	21.8	40.1
Fort Brady, Lake Superior	600	37.6	62.0	43.5	18.3	40.4
Milwaukee, Wis	591	42.3	67.3	50.1	26.0	46.4
Chicago, Ill	591	44.9	67.3	48.8	25.9	46.7
Fort Madison, Iowa	550 ?	50.5	73.2	53.1	26.3	50.8
St. Paul's, Minn	820	45.6	70.6	45.9	16.1	44.6
Fort Scott, Kansas	1,000 ?	54.8	74.9	55.3	33.0	54.5
Fort Leavenworth, Kansas	896	53.8	74.1	53.7	29.6	52.8
Fort Riley, Kansas	1,147	56.5	77.2	60.2	32.4	56.6
Fort Kearney, Neb	2,360	46.8	71.5	49.3	23.0	47.7
Fort Laramie, Neb	4,519	46.8	71.9	50.3	31.1	50.1
Great Salt Lake	4,351	51.7	75.9	---	32.1	---
Fort Benton, Upper Mo	2,663	49.9	72.8	44.5	25.4	48.3
Fort Union, Texas	6,418	48.3	67.3	48.3	32.6	49.1
Santa Fe, New Mexico	6,846	49.7	70.4	50.6	31.6	50.6
Fort Yuma, Col	120	72.1	90.0	75.7	56.8	73.6
San Francisco, Cal	50	57.0	60.1	60.1	51.5	57.2
Sacramento, Cal	50	59.2	72.8	61.3	46.3	59.9
Fort Miller, Cal	402	62.8	85.5	66.4	49.3	66.0
Dalles of Columbia	350	53.0	70.3	52.2	35 6	52.8
Astoria, Oregon	50	51.1	61.6	53.7	42.4	52.5
Sitka, Alaska	50	40.0	54.2	43.9	32.2	42.6

ANNUAL PRECIPITATION OF RAIN AT DIFFERENT STATIONS IN THE UNITED STATES.

STATIONS.	SPRING.	SUMM'R	AUT'MN	WINTER	YEAR.
Toronto, Canada	7.16	9.57	10.33	4.29	31.35
Portland, Me	12.11	10.28	11.93	10.93	45.25
Portsmouth, N. H	9.03	9.21	8.95	8.38	35.57
Cambridge, Mass	10.85	11.17	12.57	9.89	44.48
Amherst, Mass	10.23	11.84	11.39	9.70	43.16
New York City	11.55	11.33	10.30	9.63	42.23
Albany, N. Y	9.79	12.31	10.27	8.30	40.67
Rochester, N. Y	6.62	8.86	9.38	5.38	30.44
Philadelphia, Pa	10.97	12.45	10.07	10.06	43.56
Gettysburg, Pa	9.74	10.20	9.77	9.10	38.81
Pittsburgh, Pa	9.38	9.87	8.23	7.48	34.96
Washington, D. C	10.45	10.52	10.16	11.07	41.20
Charleston, S. C	8.60	18.68	11.61	9.40	48.29
Vera Cruz, Mexico	31.90	116.80	51.40	5.50	183.20
Pensacola, Fla	12.86	18.69	13.71	11.72	56.98
Mobile, Ala	14.24	18.00	13.91	18.27	64.42
New Orleans, La	11.29	17.28	9.62	12.71	50.90
Jackson, Miss	10.90	14.20	9.50	18.40	53.00
Fort Jessup, La	13.68	10.94	9.74	11.49	45.85
Fort Towson, I. T	15.55	14.36	12.23	8.94	51.08
St. Louis, Mo	12.30	14.14	8.94	6.94	42.32
Cincinnati, O	12.14	13.70	9.90	11.15	40.89
Hudson, O	9.76	8.87	6.16	8.00	32.79
Ann Arbor, Mich	7.30	11.20	7.00	3.10	28.60
Mackinac, Mich	4.67	8.88	7.01	3.31	23.87
Fort Brady, Mich	5.44	9.97	10.76	5.18	31.35
Milwaukee, Wis	6.60	9.70	6.80	4.20	27.20
St. Paul, Minn	6.61	10.92	5.98	1.92	25.43
Fort Madison, Iowa	15.30	15.90	14.50	4.70	50.50
Fort Scott, Kansas	12.57	16.37	8.39	4.79	42.12
Fort Leavenworth, Kansas	7.97	12.24	7.33	2.75	30.29
Fort Riley, Kansas	7.91	7.15	5.58	1.26	21.90
Fort Kearney, Neb	10.80	12.05	3.82	1.31	27.98
Fort Laramie, Neb	8.69	5.70	3.96	1.63	19.98
Fort Union, Texas	2.47	9.62	5.12	2.03	19.24
El Paso, New Mexico	0.70	3.56	5.25	1.70	11.21
Santa Fe, New Mexico	2.83	8.90	6.02	2.08	19.83
Fort Yuma, Cal	0 27	1.30	0.86	0.72	3.15
San Francisco, Cal	7.50	0.09	2.96	11.34	21.95
Sacramento, Cal	7.01	0.00	6 61	12.11	25.73
Fort Miller, Cal	9.57	0.02	2.80	9.79	22.18
Astoria, Oregon	16.43	4.00	21.77	44 15	86.35
Steilacoom, Wash. Ter	11.19	3 85	15.83	22.62	53.49
Dalles of Columbia	2.63	0.42	3.78	6.98	13.81
Sitka, Alaska	18.32	15.75	32.10	23.77	89.94

In the lower Valley and in the densely wooded regions the rainfall is large for all the seasons, and the difference for the seasons not very great; but when the point is reached where the average fall of the year begins to decrease, in about the same degree does the amount of precipitation for the fall and winter diminish, leaving the spring and summer rainfall tolerably near a constant quantity. This law applies particularly to the region between western Indiana and the mountains. It, however, requires a broad average both of surface and of years, there being important variations for special localities and years. But for this law of rains the vast plains of the upper western Valley would be a real desert. Were the rains there equally distributed through all the seasons the amount falling in the productive seasons would not be sufficient for the grasses and grains.

Precipitation of rain may be materially increased by planting trees. They do not refuse to grow when introduced and cared for by man, and a considerable modification in the dryness of the western regions is possible. The long rivers that flow from the mountains across these dry plains to the central Valley furnish the means of irrigating over a large portion of the best lands, which, with attention to forest growth, will ultimately introduce very great and favorable changes in the extreme west and northwest of the Valley.

Russia, in Europe, and the Valley of the Amazon, in South America, have points in common with the Mississippi Valley, and are destined to exert a great influence on the future of mankind. It will be interesting to compare them and see in what points our Valley excels.

Russia is a vast plain, stretching from the Arctic Ocean to the Black Sea. It has, to some extent, the character of a shallow trough, there being mountains on the east and higher regions at the north and south of its western boundary, with an opening between, which includes the Baltic Sea and the Northern Plains of Germany. On the southeast the Ural

Mountains melt into a plain that extends across Siberia. From north to south, through 2,000 miles, there is a gradual descent to the Black Sea. The extreme north has an arctic climate and vegetation; below that is a vast forest, more or less marshy. A cold and rigorous climate extends far down the slope. The lower half is largely occupied by treeless plains called steppes—closely resembling the prairies of the Mississippi Valley.

Instead of being a grand unity in diversity, in which the north and south temper each other, it is rather an assemblage of contrasts. Dry and warm in the south, it is wet and cold in the north. The geological formations have as little unity. The best soil is in the lower interior, and not in the best region to secure the largest results. There are many long streams flowing southward, but not in a single system, with a great central trunk, like the Mississippi. It has very great resources, part of the soil being extremely fruitful and very little of it absolutely barren, but it fails to be well distributed. It has great mineral resources in the Urals and large quantities of coal, but far away from the most populous regions and commercial centers. Thus with great advantages are coupled embarrassing extremes and difficulties of position and relations not known in the Great Valley.

The Valley of the Amazon is more than a third larger than that of the Mississippi proper, and excels it in the unity and extent of its river system. It descends gently 3,000 miles from the watershed of the Andes to the Atlantic. Some of the head waters of the Amazon are said to be within 60 miles of the Pacific shore. It has a fertile soil and is provided with a deep and soft layer of fine earth over its upper rocks, believed by Agassiz the product of a vast glacier, like that which furnished the drift of our upper Valley. This is doubted by other geologists, but it is remarkably useful however produced. This great Valley is extremely well watered; the cloud-bearing winds from the Atlantic, entering its eastern opening, deposit their precious burden over its whole extent,and yield their last reserve to the chill air of the Andes, whence it flows in innumerable streams down the fertile slope to swell the Amazon. The relations of this Valley with the Basin of the Orinoco, on the north, are such as almost to unite the two, and the pampas and llanos of the northern and southern interior find a natural outlet by the Amazon.

It is extremely fruitful, the soil being abundantly good. But with all these extreme advantages, and others that might be mentioned, it must be ranked below the Valley of the Mississippi by its very exaggerations. It lies under the equator through its greatest length, and though described as more moderate in temperature and healthfulness than might be expected, it has an eternal summer, and the vegetable kingdom displays a power and luxuriance that will long remain uncontrolled by man. Abundant moisture, abundant heat, and a consequent extremely rich and stimulating vegetable mold unfit it, for the most part, for the production of concentrated fruits and grains. Tropical fruits, valuable woods, and many extraordinary medicinal and economical products abound. It furnishes much that is of value to general commerce, but nature is not controllable. She has, as it were, taken the bits between her teeth. She is here wild and untamable, to a large extent, and declines the faithful service to man that is so eminent a feature of the sister Valley of North America. She furnishes remarkable sources of wealth to a civilization firmly established and harmoniously developed by the help of a wide range of the most useful resources and under the invigorating climate of the temperate zone. The enervating heat, the spontaneous fruits which supply nearly all the immediate necessities of man with little labor, and the difficulty of acquiring any measure of control over the energies of nature render this extraordinary Valley unfavorable to the development of the elements of civilization. It depresses instead of stimulating the mental and moral energies lodged in humanity. It was a magnificent inheritance for the Portuguese, but has embarrassed rather than aided their progress during the three hundred years and more that it has been in their possession.

All things considered, the Valley of the Mississippi has many points of great superiority to any other region in the world. In particular things some regions are more highly favored ; but for the avoidance of extremes in every point of view, united with the most solid and comprehensive resources, it is unrivalled. The value of these is enhanced by such a location as to greatly assist the progressive development of the highest form of civilization known to man. The climate, the Lake and River systems and the Gulf unite with the form of the Valley, the structure of the mountains, the general relations to other parts of the continent and the world, to give the greatest possible value to the products of its soils and mines.

All these circumstances combined with the social and political condition of Europe to select for it, at the right time, the most desirable population that could have been found. Industrious, intelligent and enterprising, they brought the mature results of European civilization and thought to the development of the institutions and industries of this broad and rich alluvial plain. These fortunate coincidences tend to make the most of all the resources of the Valley, but especially of its agricultural capacities. They are seen to offer a solid foundation for national development. Every other form of industry is more or less fluctuating; this is steady and sure. Its slow and laboriously earned gains exert a more healthy influence on character than the alternate profusion and painful straits—the ebb and flow of success—in commerce, manufactures, and trade.

Abundance is easily secured without excessive, slavish toil, yet requires steady physical application, under the direction of intelligence, in a healthy and inspiring climate. A mine of the precious metals, a branch of manufacture, a line of commerce may, by intelligent energy and skill, soon be exhausted with great temporary results; but a painful, disorganizing reaction follows. The agricultural resources of the Valley are for all time, and useless beyond the immediate supply of human wants—a steady perennial spring, to become, in time, a powerful stream for the comfort of mankind.

CHAPTER X.

THE MOUND BUILDERS AND THE FIRST MEN IN THE VALLEY.

When the Age of Ice drew to its close the Champlain Period opened. The indications are that during the Glacial Period the northern part of the continent was raised at least some hundreds of feet higher than now. This elevation was followed by a sinking of the same regions, or, at least, of all that lay below the northern border of Lake Superior, several hundred feet lower than now. It was as if Mother Nature filled her lungs and emptied them again, causing a measured rise and fall of her bosom. The St. Lawrence Valley was an arm of the sea far up toward Lake Ontario, and salt-water stood some hundreds of feet deep over Montreal. Lake Champlain was an interior sea, visited by whales, while huge animals, among them the mammoth, browsed on its banks and left their bones in its marshes.

Both in this country and in Europe multitudes of very large and very ferocious animals made their appearance in this Age of the Drift—often called the Champlain Period, because it has been most carefully studied near that Lake—and at this time the first traces of man are found on each continent. It was a period of fresh-water overflow from the melting ice, of lakes and marshes in the Valley, and the remains of animals were buried in the drift as it was distributed by the surging floods. The traces of man in this period are very numerous in Europe, and are not wanting in America, though not so fully studied here.

Many facts have been collected which seem to leave no doubt that men lived in the Valley when the mammoth, the mastodon, the lion, the tiger, and other large and ferocious animals, since extinct, roamed over the highlands, and were mired in the marshes. "Big-bone Lick," in Kentucky, acquired its name from the numbers of the immense animals whose remains were entombed there. In a similar spot near the Osage River, in Missouri, the bones of some eighty or more distinct animals have been found. Among these were found several arrow-heads of human manufacture. One was *beneath* the bones of a mammoth entombed fifteen feet below the surface in a mass of drift.

In another part of the same state the indications were very plain that one of these huge animals was mired in the presence of men, who attacked it with flint-tipped arrows, spears, and stone axes, when, finding the animal helpless but tenacious of life, they built a fire around its head and destroyed it, after which the spot, with all these proofs of human presence, was covered by drift and soil. Numerous marks of a similar kind have been found at the foot of the Rocky Mountains. In the Mississippi delta, below New Orleans, a human skeleton was found beneath two successive forests of cypress. Many other indications, within and without the Valley, go to confirm the same point. The shell-heaps of Florida and California are as significant as the "Kitchen-middings" of Denmark.

So far as the general tone of these indications can now be estimated, they are fully in keeping with later developments. The early European man progressed steadily, so that four different stages of approach to civilization are seen to stand out with great distinctness. They are characterized by the arms and tools of each period as the Rude Stone Age, the Polished Stone Age, the Bronze Age, and the Iron Age.

These distinctions are not as sharp and clear in America, but there is a marked resemblance. The implements, indicated by their position in the drift as the oldest on this continent, are rude. The Mound Builders belonged to the Polished Stone Age, and the Peruvians reach the development of the Bronze Age; but the Iron Age was introduced by Europeans.

The movement toward civilization here was slower and had some very weak sides where that of the Old World came out strong. It can not well be doubted, however, that the Valley was inhabited as early as the western part of Europe; that the start was from the same point of rudeness; and that progress was only made by select races under favoring circumstances. The Indians were always savages, and it is unlikely that the first men in the Valley tended toward civilization.

Whence came the first inhabitants of America? It is a question that has awakened great interest, and the books that have been written on it are to be counted by thousands. It has been, and is still, a general impression that the human race originated in Asia. Many courses of inquiry indicate the highlands near the Caspian Sea as the point from which dispersion commenced for the Old World races; but the more closely the Aborigines and ancient monuments of America are studied, the more difficult does it seem to make out their origin. Books have been written to prove their descent from almost every leading race in Asia and Europe; but the more exact studies of recent science show that they have no detailed likeness with any, and that their separation—if that took place—must have been accomplished before the original stock had made any important or permanent progress. In color, languages and features of character, viewed as a whole, they are a class apart, while the Old World has *four* well-marked classes.

After these first traces of man there seems to be, as yet, a long blank during which, in Europe, the record is apparently continuous; but that was a region of limited and favorable areas surrounded with barriers which protected dawning improvement, while America permitted wide dispersion. This circumstance was highly unfavorable to steady advance. There was too wide a range over a region abundant in spontaneous gifts to man, which, in temporary want or danger, permitted easy migration to better supplies and greater security.

It is not probable that American civilization *commenced* in the Valley. There are dim traces of its beginning in the northern parts of South America, near the Andes or among them, and in the confined regions of Central America. Thence, so near as can now be estimated, emigrated a people who had made the start in social organization that bound them too closely and strongly together to permit them to fall apart in the vast spaces of the Mississippi Valley.

These people are called Mound Builders. The Valley contained an immense number of mounds, mainly heaps of the loose earth and soil, but occasionally entirely or partially composed of stone, with a few instances of supporting surfaces of sun-dried brick. The whole number found has been estimated at 100,000, more than 10,000 of which were in the State of Ohio, where they were studied by competent men of science more extensively and accurately than elsewhere. Commencing on the head-waters of the Ohio they extended westward to Nebraska, from near the lakes to the Gulf, and from Texas to the Atlantic coast of Florida. They were mostly found in the fertile valleys of streams where the soil was richest and most easily worked; seldom in the interior or far distant from those parts of the branches of the great river system that could be navigated by canoes. They appear to have been constructed in greater number and variety in the lower part of Ohio; were very numerous in the central Valley near the Mississippi; and were more frequently of large size further south. They occupied what may be considered the very best parts of the Valley and those most easily accessible from the main streams by water. They varied somewhat in evident destination in different sections, but bore the strongest marks, without and within, of a common origin.

Their location, their size, the purpose evident in them and the relics they contained were found eloquent in descriptions of a period and a people wholly unknown to the modern Aborigines. No other record of them has been found that is decisive in itself, although the traditions, monuments and history of the Indians contain some traces apparently pointing to them, and which help us to some interesting probabilities. Natural causes, working on so large a scale and with material so pliable as the surface of the Valley, have often produced curious results, and it was formerly common to attribute all the mounds to geological causes that could not be referred to agency of the Indian tribes; but that idea has never been entertained by those who have made the more characteristic of them a careful study. The Mound Builders have been regarded as a myth only by those writers who had received imperfect information.

All the facts thus far gathered furnish unequivocal testimony to the existence in the Valley at a period far back in the twilight of *American* time, and probably also during times that were pre-historic in the Old World, of a very numerous and considerably civilized population in the Valley. This race was evidently one controlled by the same ideas and sympathies, fairly uniform in mental, moral and social culture. That culture was too low in kind to have led to results so extensive without settled institutions which must have been based on a strong and vigorously conducted government. The evidence is also fairly conclusive that there was a common bond between all the parts of this population which, at the grade of development they had reached, must have been a *central* government. There are many evidences of harmony and none of conflict with each other. War was prepared for only in one region, and as that was on the extreme border the danger must have been from without.

It is probable that this people vanished from the Valley at about the time that authentic history began its records in Greece, and that their occupation of it covered both the Rude and Polished Stone Ages of European Pre-historic time. It was, apparently, a long occupation by a mild, peaceable race governed with vigor and considerable intelligence.

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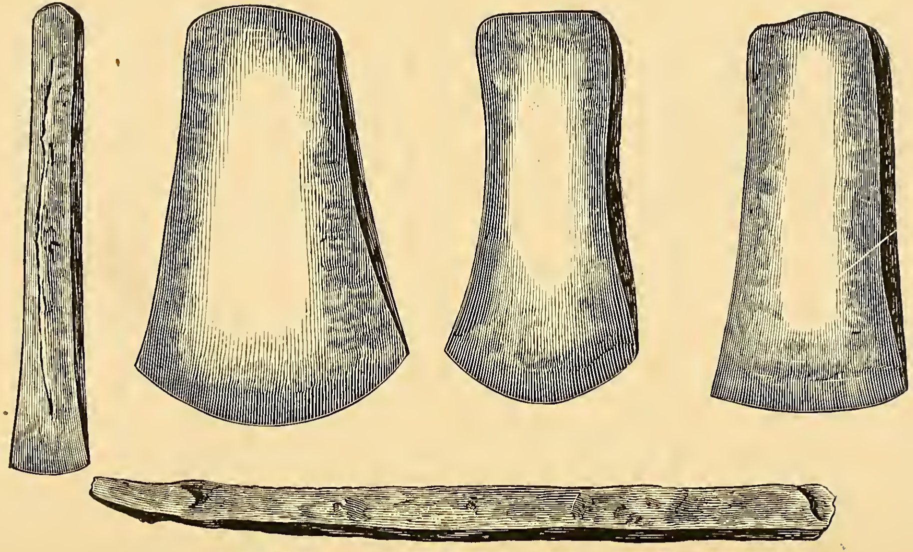

COPPER TOOLS FROM THE MOUNDS.

CHAPTER XI.

THE LABORS OF THE MOUND BUILDERS.

The active industry that has been employed about a hundred years in changing the surface of the Valley, as the Mound Builders left it, into a great center of civilization and enterprise, has removed many of the monuments of this ancient race. The graves, the altars, and the temples were more numerous near many of the present centers of wealth and activity than elsewhere. The good sense of these primitive men was apparently as sharp and clear to advantages of situation and value of soils as the many-sided intelligence of a more enlightened people. It is also another proof that they selected freely; that they were not troubled, for the most part, with enemies. They settled on the best lands, and evidently did not need to fear the vicinity of the natural highway—the rivers—which the Indians of later times commonly avoided with great care, as places of residence, because likely to bring enemies to the sudden ruin of their towns.

Thus, the remnant of ruins which the wasting effect of a score and more of centuries had spared was, in large part, obliterated before their significance was properly understood. If these are added to the multitudes remaining and the other multitudes which the tooth of time had already devoured, we shall have a vast summary of toil invested by the Mound Builders in their works. They must have been a very numerous and industrious people. The mounds represent only the outlines and foundations of their *public* works. Their private dwellings, the structures of wood that surmounted, were enclosed by, or surrounded these remains, were too light and temporary to be preserved. The labors of cultivation that secured food for servants and attendants on these works, with all their painful toil in preparing tools under the greatest disadvantages, must have represented another immense outlay of human energy.

Of the nearly twelve thousand works remaining in Ohio, when the general critical examination was made in 1845–7, fifteen hundred were inclosures. These consisted of walls, sometimes miles in total length, surrounding—and sometimes surrounded by—mounds of various size and form, which, with modern facilities for moving earth, would represent the labor of thousands of men and animals for a great length of time. The inclosures and mounds have been classified as fortifications, temples, altars, sepulchres, signal stations and symbolic figures. Various circumstances make the aim in their construction, and sometimes their actual use after they were built, very evident to the student of them who makes the study with due intelligence and care. Too many have been explored with haste by persons who did not suspect the great importance of uncovering ancient buried relics with caution and leaving them in undisturbed position until an extensive observation had been made and recorded of their relation to each other and to their surroundings; for by these circumstances much of their significance is usually determined. They often reveal the manner and the purpose of burial.

More than thirty years of the nineteenth century had passed before the investigations of men of science in Europe were directed to the buried traces of pre-historic man on that continent, and the idea of gaining precise information from such studies was not fully accepted by high scientific authorities until some years after. It is not surprising, therefore, that these mounds, widely scattered in a new country where scientific experts were less numerous than in the Old World, should be little noticed, and never studied with sufficient carefulness to discover the right key to their revelations. They had not been unnoticed, however, and some extravagant theories concerning their origin had been based on superficial observations of their appearance and the curious relics often found in them. These theories had little value, because not founded on sufficiently minute and extended examination.

In 1845 a careful survey of the mounds in Ohio was begun and continued for two years, by thoroughly competent observers, with a scientific care and accuracy that led to important conclusions. A description of these studies, that discarded vague suppositions and loose estimates and furnished detailed and accurate explanations of the leading features of the mounds and their contents, was published. Much interest was awakened in the scientific world, the mounds in all parts of the country were critically examined by suitable persons, and the information already gained was confirmed and extended.

The information here given, and the interesting inferences drawn, are gathered from these scientific records. Their accuracy can not be questioned, for as the number of thoroughly trained observers has increased in recent years, the facts have been repeatedly re-studied and verified.

Some of the mounds were evidently military structures, designed for defence against enemies, most of the points fortified being selected with a judgment that would do honor to a modern engineer corps, and with a lavish display of labor and pains that is extremely significant. Fort Hill, Ohio, was a fortress of great strength, occupying the summit of a hill five hundred feet high on two of its sides, and surrounded with a wall along the edge of the hill, the materials for which were thrown up from a deep ditch dug around the brow. The wall and the ditch are more than a mile and a half in circuit and enclose an area of forty-eight acres. The wall, at the more accessible points, is said to be still from six to fifteen feet in height. When examined, it was covered with a heavy forest of gigantic trees, standing and fallen, and some of the latter could not have been less than a thousand years old. Large artificial reservoirs for water indicate that it was once provided with all the means to stand a formidable siege.

Another defensive work, called Fort Ancient, on the Little Miami River, had walls nearly *four miles* in length, besides mounds, parallels and curtain walls. These were, when carefully surveyed by a competent party from Cincinnati, eighteen to twenty feet high at exposed points, and the number of cubic yards of excavation made in constructing them was estimated at nearly seven hundred thousand. These are but what *remain* after the storms of perhaps thousands of years have done their best to diminish and wash them away.

Another, in the Scioto Valley, embraces within its defenses an area of one hundred and twenty acres; a stream was turned out of its course to permit a complete circuit of wall; and it includes mounds which, with the walls, contain three million cubic feet of earth. Fortified and covered ways sometimes lead from fortresses on heights to the streams below. Evidences of military foresight and skill in the art of defence are often very striking, and indicate mature reflection after extensive experience as well as command of unlimited labor for long periods.

One military work included between 600,000 and 700,000 cubic yards of earth thrown up; and the system of defenses at the mouth of the Scioto River is said to be at least twenty miles in total length, though embracing not more than two hundred acres of inclosure. These defensive works are usually on the points of bluffs in bends of rivers, or in the angle formed by the meeting of the streams. They are usually in the vicinity of numerous works of a different character, indicating the presence of a large population and a center of the community. They were evidently designed to form a protection, and probably, as danger grew more threatening, became places of retreat for the inhabitants. Sometimes these inclosures are so extensive, and embrace so many mounds of various form and size, as to suggest that here was a walled town.

A curious implication of foresight and ability in defence is

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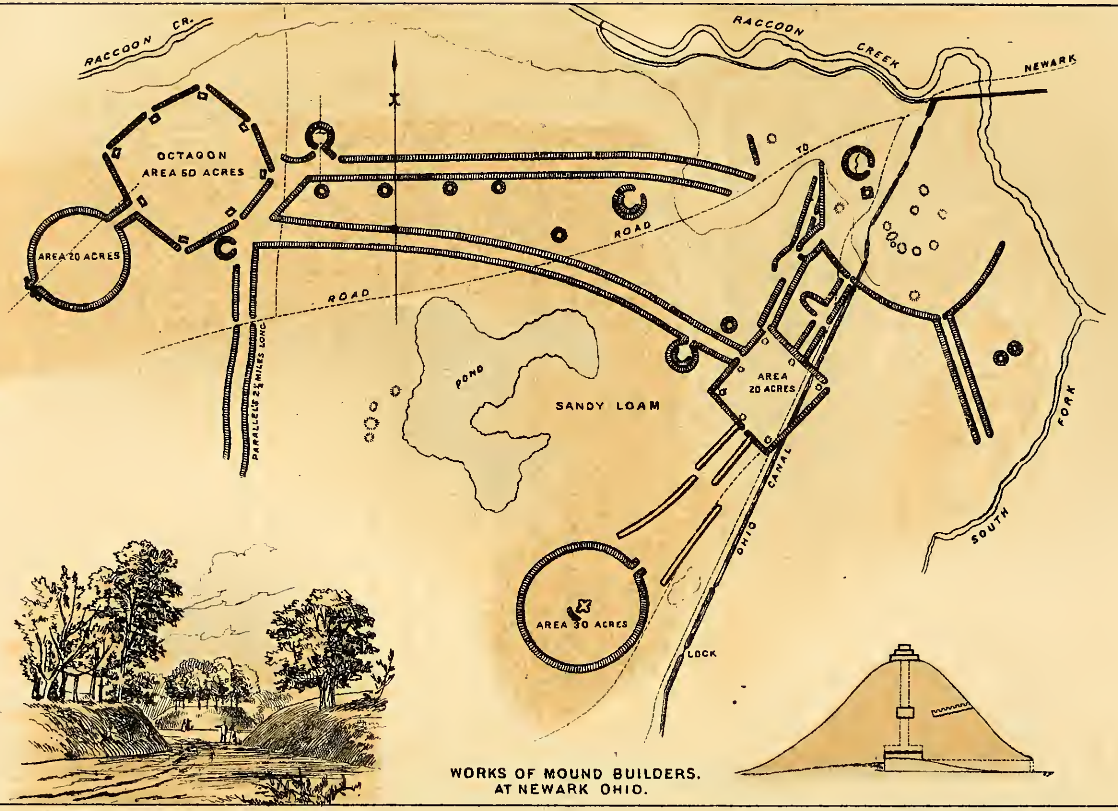
RACCOON CR.
RACCOON CREEK
NEWARK
OCTAGON
AREA 50 ACRES
AREA 20 ACRES
TO
ROAD
ROAD
PARALLELS 2¼ MILES LONG
POND
SANDY LOAM
AREA 20 ACRES
AREA 30 ACRES
OHIO CANAL
LOCK
SOUTH FORK

WORKS OF MOUND BUILDERS.
AT NEWARK OHIO.

MOUNDS FORMING GATEWAY OF OCTAGON

SECTION OF GRAVE CREEK MOUND, W.VA.

found in curtain and parallel walls to protect openings or gates in the defenses, and to connect different structures. A long period of danger would seem to have produced a military class and elaborate and intelligent precautions. This idea is supplemented by the frequent occurrence of smaller works on the highest points, as if they were outposts of larger fortresses; and of elevations on the highest hills with level tops and traces of fire—sites for beacon fires. If the forests were removed it is said these could be seen for many miles around. By means of these signal stations warning of the approach of danger could be transmitted over a large region in a few minutes.

These warlike indications are almost entirely confined to the northeast section of the Valley, as if danger only threatened from the region lying between Lakes Erie and Ontario, and the mountains of northwestern Pennsylvania. The most warlike and vigorous race of Indian conquerors, the Iroquois, or Five Nations, were found settled here in modern times. A few thousand resolute warriors intimidated half a continent by their expeditions from this point.

Sacred inclosures are also numerous in the same region. They much more rarely occur further west, and especially south. These are commonly found on the broad and beautiful terraces of the river bottoms. They are of various sizes and forms—square, circular, elliptical and octagonal. The Newark Works cover hundreds of acres, and contain examples of all these various forms which are joined by connecting walled avenues into one system.

A most interesting point in connection with this class of inclosures is that they are perfect squares or circles on a large scale. There is, also, a definite relation between the areas of different forms. These walls, constructed with so much mathematical precision, inclose mounds of various forms symmetrically arranged. Unfortunately, all this is only suggestive—not explanatory. For that explanation we must probably look to the rock monuments of Central America and Mexico, which appear to indicate the purposes of such outlines.

Temple mounds are leveled on the summit. They are of various sizes and forms, but usually are oblong squares with the corners pointing to the cardinal points of the compass. Commonly their summits are reached by graded ways. Sometimes one or more terraces intervene between the general level and the summit, all connected together by these graded ways. Often smaller mounds are found on the top of platform, or temple mounds, of such form or contents as to suggest that they were, in some cases, the foundation of buildings, in others, altars of sacrifice. These platform mounds were much more numerous, and generally larger, toward the south than in the northeast.

The American Bottom in Illinois, opposite St. Louis, formerly contained at least two hundred mounds, among which was the immense Cahokia Mound. It was 700 feet long at base, by 500 wide—nearly half a mile in circumference—and 90 feet high. A graded way led to a terrace 300 feet long by 160 wide, and the summit was a platform 460 feet long by 200 wide. A conical mound of small dimensions but 10 feet high contained bones, funereal vases and stone implements. Four other smaller mounds, similar in form, stood near it on the level plain; but there was no inclosing wall. There is reason to believe that imposing religious rites were celebrated in the temples of which this vast mass was the foundation. The mounds were very numerous in this vicinity. St. Louis, the "Mound City," received its popular name from the number formerly covering its site.

The whole immediate Valley of the Mississippi from this point, including the lower valleys of its tributaries, especially on the east side, was rich in mounds and other indications of a dense ancient population. Among them these truncated pyramids were very numerous. The Indian name of the

Yazoo River means "The River of Ancient Ruins." A mound near Florence, in the Valley of the Tennessee, was described thirty years ago as being built so that its corners exactly coincided with the cardinal points of the compass. It was about seventy feet high, and its base covered an acre of ground. A group of mounds in Chickasaw County, Mississippi, described by the same observer in 1847, was surrounded by a wall inclosing six acres of ground.

The great mound at Seltzertown, Mississippi, was among the largest and most interesting. It was 600 feet long by 400 feet wide at base. Its top, of four acres in extent, was reached by a graded way. The height of this immense pile was forty feet. Three small circular mounds stood on the top—one at each end and one at the center. Those at the ends were leveled at their summits. The corners of the great mound were about in harmony with the four principal points of the compass, the greater length being from east to west. The circular mound at the western extremity of the platform rose to the height of forty feet, that at the east being somewhat less. Traces of eight other mounds, at regular distances, were also visible on the broad platform. The north side of the large mound was covered with a wall of sun-dried brick two feet thick, and supporting angular tumuli marked the corners which were covered by large bricks having on them the print of human heads. Skeletons, vases, ashes and other evidences of burnt offerings, were found by Dr. Dickeson, the explorer, on the mound. A ditch, averaging ten feet in depth when examined, surrounded the huge mound.

It would require volumes to note the descriptions that have been given of similar structures over the South. Although extremely numerous only in the neighborhood of the Mississippi and its eastern tributaries, they have been found across the whole Gulf slope to the Atlantic and a considerable distance west of the Great River, and always giving rise to the same suggestions by similarity of features and contents.

The Sacrificial Mounds do not differ very much from Burial Mounds in external appearance, but a careful examination of the interior reveals a striking unlikeness and many interesting and suggestive points. They, so far as studied, more usually occur within inclosures, and have not been much noticed by explorers in the more Western and the Southern Valley. This may, to some extent, arise from the fact that wide-spread critical examination by the same parties and those thoroughly competent, by long experience, for that class of inquiries, has been mostly confined to the upper part of the Valley. There have been a great number of excellent observers in the south, but the field of each was restricted and they worked without concert with each other. It may, however, be fairly assumed that if they existed there they would have been noticed. The platform, or temple, mounds are few in the region where these altars are numerous, and where the altars are absent the temple mounds are the prevailing type. It may, therefore, be inferred that religious rites were chiefly practiced on these elevated platforms, where they existed, and in structures on them which have mostly disappeared under the wasting hand of time.

Three circumstances characterize the altar mounds. They are within or near sacred places or other inclosures; they are always stratified in a peculiar way; and they contain symmetrical platforms within, and generally not far above the original base of the mound, on which there are traces of fire and of various substances more or less perfectly consumed by it. A fourth may be mentioned: after frequent, and often evidently long-continued, use they were covered with earth and became conical mounds. If this was not always the case the exceptions noted have been few.

They are of various sizes and shapes, but symmetrical—usually formed of burned clay which is often placed above a first layer of sand. A few were formed of stone. One was of round selected cobble-stones laid with much care and art.

In form the parts constituting the altar of sacrifice were round, elliptical, square, or oblong. Some were barely two feet across the prepared altar, while others are stated to be fifty feet long by fifteen wide. The usual diameter was found to be from five to eight feet. They were nearly all composed of fine clay, not found on the spot, which commonly rested on the surface of the ground, the first elevation not greatly exceeding a foot. This clay is usually burned very hard through all or most of its depth. Where the evidence of fire was slight few remains were found. Frequently, after long-continued use had burned it out, more or less, a fresh coat of clay was added—in some cases this was done repeatedly—and finally all was covered with earth, sometimes to a depth of ten or fifteen feet. The final burial of the whole with earth appears to have been made while the fire was still glowing, and thus many fragments of perishable material, after having become charred but not burned, were the more perfectly preserved. The burnt offerings made on these altars were exceedingly various, and must have included much that was most precious to the ancient worshippers.

Human bones, more or less consumed, and sometimes entirely consumed and to be detected only by analysis of the ashes, were quite commonly found. As the ashes often contain traces of consumed vegetables and charred maize, it is inferred that they made the offering of First Fruits to their deity—so common among the early nations of the Old World. In some cases the charred remains of cloth were found and a great variety of ornaments, weapons, tools and specimens of what must have been high art in those days, at least to them.

On the banks of the Scioto River, in Ohio, near Chillicothe, was a sacred inclosure apparently devoted to altar worship. It contained thirteen acres, over which were distributed twenty-four mounds. One of these was one hundred and forty feet in length by sixty in greatest breadth. They all contained altars, on which were the calcined remains of an extremely large number and variety of offerings. It is called "Mound City." A singular feature of these altars was that a different class of offerings was found in each. One contained hundreds of pipes and little else; another, pottery and copper or stone ornaments; another, shells; discs of hornstone, to the number of thousands, were found in one; some contained only a layer of ashes. A quarter of a mile distant from this was an inclosure of twenty-eight acres, with an outer fosse or ditch. It was evidently a walled town, and some circumstances suggested that it once contained the residences of the priesthood attendant on the sacred inclosure near by. In the center of this defensive work was a sacrificial mound. The altar of this mound was very elaborately built. The base was of sand packed tight in an excavation made in the soil eight inches deep. This excavation was a circle thirteen feet in diameter, and burnt offerings of men or animals appear to have been made on this compacted sand. The ashes had been removed but the sand was discolored, apparently by fatty matter, and burned hard, so as to be black and strongly cemented on the surface. Another layer of sand was then laid over it of the same thickness but only seven feet in diameter, which was paved with round stones a little larger than a hen's egg, laid with the utmost precision and firmly bedded in the sand. Ashes, apparently the cinders of a human body, rested on this pavement with two heaps of bracelets encircling some bones not quite reduced to ash—five bracelets in each. Two thick plates of mica were the only other ornaments found. These were first covered with a layer of sand and then the whole was covered with earth, forming a circular mound. Occasionally a "brick hearth," appearing to be one of these altars not yet covered over, seems to intimate that the ceremonies of the Mound Builders were suddenly interrupted and never resumed —very likely by the final catastrophe that drove them from their pleasant homes in the Valley. It thus appears that the altar mounds were substitutes for the temples or platform mounds, on whose summits, as on the Mexican Teocallis and Peruvian Huacas, religious rites were performed. These Mexican truncated pyramids, on one of which the captive companions of Cortez were offered in sacrifice, would now reveal few traces of the rites seen and recorded by the conqueror and his followers. These altars, so carefully buried, contain information that would without them have been wholly lost to us. How little would have remained, after two or three thousand years of neglect and decay to show the true character of Aztec civilization and religious rites, notwithstanding that their monuments were of more durable material than the mounds of the Valley! These altars, so carefully and suddenly buried in the very moment of the crisis finishing their ceremonies, aid to throw light on the forest-buried temples of Uxmal and Palenque and other ancient cities of Central America, and show how the mound foundations of those edifices and the teocallis of Mexico originated.

The mounds serving as tombs are extremely numerous in most parts of the Valley. In the section that has been most critically examined, however, they seem to be less numerous, and, in general, they were probably the burial places only of the more distinguished of the people. The common mass of the population must have consisted of virtual slaves, who had neither the aspiration nor time to produce such costly tombs.

A large part of these burials were accompanied by the use of fire. Cremation was extensively practiced by the Mound Builders. The sepulchral mounds are variable in size—from six to eighty feet in height. Sometimes a large one was surrounded by a group of smaller ones, and sometimes they crowd on one another and seem to overlap, as if to show more clearly the intimate relations of the group. Where fire has been employed it appears to have been covered still more suddenly than that of the altars, while in full glow, so that often the charred coals of the wood, with few ashes, still remain.

With the dead were also buried the personal ornaments of the deceased, and some of his more valued treasures. Necklaces of pearl, or beads made from shells, are sometimes found in great numbers, and where the body was not burned it is seen that they encircled the neck or arms of the corpse when it was interred.

In some cases where the body was buried without burning we have a hint of the long time that has passed since the formation of the mound. In England skeletons known to have been buried in "Barrows," as the ancient mounds are there called, 1,800 years ago, have been found whole and firm. This is rarely or never the case in the Valley in the driest and most favorable situations. On a point of the third terrace, about one hundred feet above the Scioto River, was a burial mound twenty-two feet high. The body had been protected by a rude sarcophagus of logs, with a floor of matting or boards. Of this wood only the crumbled dust remained, although the dry compact earth still retained the cast of the logs, and the frame of the corpse turned to ashes at the first touch of the air. Several hundred beads, made from shells and the ivory tusk of some animal, had the appearance of being wrought by turning rather than by hand. The appearance of fire was, in this case, at some distance from the body, indicating some ceremony by fire other than that of cremation.

The ornaments and other valuables buried with the dead must have been more costly and precious to them than gold would be to us. The material was usually brought from a great distance and wrought with infinite pains and great skill. It is remarked that the presence of warlike implements in the graves of the dead is a rare exception, which speaks volumes for their peaceable character and generally quiet life. The same absence of military signs and trophies has been noticed in the ruins of Central America. Often pieces of mica were disposed about the dead, sometimes pieces of cloth are not fully decayed, and feather garments have been found.

But they did not always honor the dead by burying valued ornaments with them. Indeed, it is declared not to have been the case as a more general rule. Sometimes a multitude of bones are found in one mound; sometimes the bones of many persons are so disposed about the principal person or persons as to intimate that they were personal attendants or close friends, slain in their honor, as was done by the Peruvians and other nations. Urn burial was much practiced in the Central and Southern Valley, and often a simple sarcophagus of flat stones protects the remains. In a few such cases skulls have been preserved to make some interesting revelations concerning the mental qualities of the race. The "Grave Creek Mound," at the junction of Grave Creek with the Ohio, in West Virginia, has acquired much celebrity by its size and some of the significant circumstances connected with it. It was seventy feet high, nine hundred feet in circumference and had two vaults—one thirty feet above the other. Two skeletons were in the lower and more elaborate vault, one surrounded by beads, one hundred and fifty in number, and an ivory or bone ornament. The other had no ornaments. The single skeleton, in the upper vault, was accompanied by more than 3,000 beads and other pieces of ornament. The largest number of the burial mounds were small and the objects found with the human bones not very numerous.

Many mounds appear to have been observatories or places for building signal fires; some are inexplicable, as yet; and many appear to be symbolic, though the idea to be conveyed is not very clear to us. They are mostly in regions outside the range of the mass of mounds. These are "animal mounds," so-called, representing birds, beasts and the human form in relief, on the level surface of the country. Most of them are found in Wisconsin, where they contain almost no relics, and it is difficult to imagine any reasonable cause for the expenditure of so much labor. Almost none of the kinds of mounds found elsewhere exist in their neighborhood.

Several of these animal mounds are found in Ohio, where they appear to have had some important religious significance. One, the figure of a bird with outstretched wings, between one and two hundred feet in its two longest measurements, was located in the center of a sacred inclosure, and was evidently used as the altar of sacrifice. Of two others in different localities and on the summit of eminences, one was in the form of an alligator, two hundred and fifty feet long, and evidently originally finished with great nicety. The other represented a serpent, fully one thousand feet long, with the jaws extended in the act of swallowing a huge object believed to represent an egg. These are probably all symbols of some thought, event, or object of especial veneration, but of what is uncertain.

The few objects found in the Wisconsin mounds are exactly similar to those of other classes of mounds, and those of Ohio seem evidently wrought by the same hands that produced the others which abound in sight of them. Perhaps some clew may yet be found to their meaning. The serpent symbol was much used among the Peruvians.

Thus it will be seen that the race of the Mounds did a vast amount of labor not connected with the necessities of daily life. Much of this work formed in the soft soil must have melted away, and perhaps shows as little of the original amount as the present ruins of Babylon display of the original vast magnitude of the City of Nebuchadnezzar. Life was far more orderly and laborious than with any American races known to us save those of Peru, Central America and Mexico, who, in some points, exceeded in the elaborateness of their civilization that of their European conquerors.

A thorough examination of the character, habits, languages and traditions of Indians furnishes very complete proof that the mounds could not have been made by their ancestors. The tribes found in North America, though differing from each other in a multitude of subordinate ways, had very striking general similarities, and in none of them were the traits revealed by the mounds of their builders paralleled. Possibly a single exception should be made in the case of the Natchez; but they were few in number, and their tribal organization was broken up before they had been much studied. It is said that their traditions referred their origin and former home to the borders of Mexico. At least they appear to have had no history to give of the origin of the mounds. If they were a branch of the ancient Mound Builder race they must have been almost completely degenerate.

The Indians were quite incapable of the vast labors which produced these structures, nor was there, from whatever side they were viewed, any trace of degeneracy or change of direction in their qualities and manner of life. They were all of one piece, so to speak. Their social, political and traditional policies were harmonious, and showed them to be true children of nature; the original untutored and savage instinct was completely crystallized. They had no account to render concerning the mounds, and had in no respect an affinity for the condition of society under which they must have been produced.

The Indians sometimes had fortifications, they had burial rites, occasionally they produced monuments and some few sculptures and works of art; but there was a wider difference between them and the products of the Mound Builders than between the last and the results of modern civilization. In those points relating to the absolute necessities of a hunter's life they had some skill, but in every other direction rudeness and simplicity were absolute. They were very strong in many of their mental traits, but strong precisely where the Mound Builders were weak, and that strength was all employed to resist progress toward civilization. No hint in institutions, in mental qualities, or in language, authorizes the supposition that their race could have been bent from its original wildness so as to develop a primitive civilization and then recover its original tone and quality. Had this been the case it would have been an anomaly in history. In fact, every known law of mental philosophy opposes the supposition, as do also all the facts yet collected.

The race of the Mounds much more resembles the early Chaldeans and Egyptians, while the Indians resemble more nearly, in several points, the nomads of Arabia, the indomitable descendants of the hunter Esau, "whose hand was against every man." Only a race of slaves submitting quietly to absolute authority can be organized and compelled to produce such vast and numerous monuments of a primitive people.

A more favorable train of influences would perhaps have reproduced in the American Indian the history of the strong-willed and enterprising Teutonic race of Europe. But the American lacked the modifying elements which Western Asia, Southern Europe and Northern Africa exerted on the wanderers of the Steppes and the rude warriors of the German forests.

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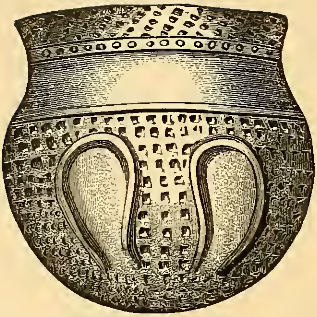
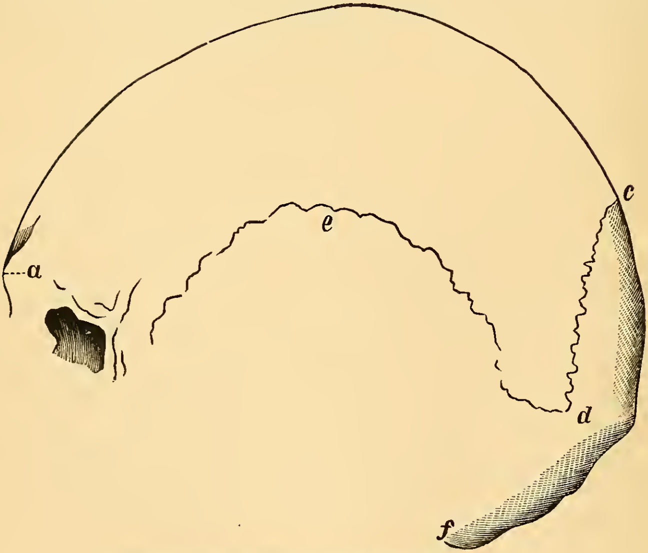


BURIAL URN, INDIANA.



SKULL OF MOUND-BUILDER, INDIANA.

CHAPTER XII.

THE CHARACTER OF THE MOUND BUILDERS AND THEIR INSTITUTIONS.

With the lapse of years, and by the increasing exactness and caution of investigation that has been noticed as a special feature of the last half-century, some indications of the mental condition of the Mound Builders have been fairly established. It required much study and care to distinguish between the skulls of the old Mound Builders and the modern Indians, who sometimes buried their dead in the mounds; but after a time these "intrusive burials," as they are called, were found to be so unlike the original ones as to be easily distinguished by a competent observer, and a very marked difference was noticed between the crania of the earlier and later race. By the persevering researches of able men many skulls, unquestionably those of the Builders of the Mounds, have been collected, and the information they convey made out.

They had a retreating forehead, and the mass of the brain was about as much less than that of the modern Indian as his is less than that of the modern European. The Mound Builders were not an intellectual race. It was long questioned whether this low forehead was not due to the fashion of applying external pressure to it in infancy, as has been practiced by the Flathead Indians and some other American tribes; but the conclusion has been reached that this was not the case. Sculpture in the ancient ruins of Central America reveals the same type of head, and various facts intimate that it was the natural form of the skull. On the other hand, the distribution of the brain, which has much to do with the tendencies and capabilities of character, were favorable. The arrangement of the brain in the European favors the intellectual faculties; in the Indian brain-force is more largely distributed to the animal faculties. The proportions of the skull in the Mound Builder indicate that his intelligence was not overborne by strong and fierce passions. In this respect the hints of the Mounds are fully sustained.

A mild and rather feeble character rendered him an easy prey to the influence of authority. The Indian had a strong personal will and a strength of passions that would not tolerate arbitrary control; while the race of the Mound submitted to it without resistence. This permitted a strong organization and the massing of activities and labor under the control of one will, which was indispensable to the commencement of civilization. The skull corroborates the testimony of the Mounds that they were not warlike. They were like the Peruvians, indisposed to contest but submissive to command, and when they did fight probably preferred to do so behind entrenchments.

A vigorous, progressive civilization requires vehement passions controlled by a strong intelligence. The primitive and partial culture we see here is the natural product of a quiet, inoffensive race, limited equally in their passions and intelligence, but easily held to the discipline that would result finally in considerable skill. This submissiveness and patient persistence, so contrary to the nature of the Indian, was fully competent to produce all the monuments and works of art whose remnants we find in the mounds.

For the most part they must have been of ordinary or medium size. It is not a point easy to verify, for they very often reduced the body to ashes, or nearly so, by fire during the funeral ceremony, and where this was not the case the bones were so much decayed as to crumble into dust when exposed to the air. There have, however, been few indications of variation from the usual standard of size sufficient to attract attention. In the demolition of a large mound at St. Louis bones were found indicating that the persons in life had been rather above the ordinary stature. In Illinois, below that city, many years ago a series of graves under low mounds were found, in which the skeletons were small, and it was supposed that a race of pigmies had been found. As in many other cases, at different points in the Valley, these bodies were protected by flat stones which were so placed as to form a coffin or sarcophagus. As no similar cases of diminutive skeletons have been discovered, except where they were evidently relics of children, it is inferred that these were not adults. The crania which have been preserved indicate ordinary size. Their choice of the most fertile localities in the Valley and their ability to devote so much labor to purposes apart from the struggle for the means of subsistence indicate that they dwelt in the midst of plenty and were possessed of abundant physical vigor.

The Peruvian mummies, preserved in large numbers, show that people to have been of small stature; but they lived mostly in the rarified air of a mountain plateau. There is much to indicate that the Mound Builders were strong and healthy, that there were many leisured classes, and that parties from the Ohio and the Lower Mississippi visited the mines of Lake Superior, the shores of the Gulf, the mountains of North Carolina and of New Mexico. The general tone of revelation by the Mounds shows us a quiet, industrious people, developing, for the most part, in undisturbed peace and plenty, whose strongest passions were connected with the religious sentiment. They had much taste in the minor arts and a good deal of personal vanity as indicated by the profusion of well-wrought ornaments found in many of the sepulchral mounds.

The evidences of a settled government are very positive, although based only on inference. The untutored instincts of the primitive man are those of the animal. He knows no higher law than his own necessities and owns no control but that of his own willful caprice. Only outward pressure, which he finds no adequate means of resisting, can overcome his love of leisure, when a supply of food has rendered him comfortable in body. To renounce control of himself and to accept the will of another as the law of his life requires much time and a steady pressure until submission becomes a well-settled habit. This habit is that of being governed, and it is only when a government has grown to the full proportions of an institution and all the resources of the people are unhesitatingly placed in its hand that it can lay broad plans and carry them out in detail. In this view the very existence of the mounds is proof of a strong government.

When we find fortifications, deliberately and wisely planned, requiring the painful toil of many thousands of men for months or years, we can not well escape the conclusion that they were in the habit of obeying an authority which exerted a sovereign control over the lives and property of the people. This is still more strongly the case when we see a sacred inclosure drawn around an intricate but harmonious series of immense works covering more than *four square miles of surface* with, square, circular, elliptical and octagonal inclosures, great mounds and long-drawn avenues included within what must, originally, have been lofty walls.

The evidence is tolerably clear that all the mounds in the Valley were built by a homogeneous people. The same ideas were plainly involved in them all. They vary in different parts, more or less, yet they intermingle and melt one into the other; no distinct line separates them. If the inclosure is chiefly characteristic of the region north of the Ohio, and the platform mound, or truncated pyramid, more prevails at the south, the inclosure is sometimes found from Mississippi to Georgia, and the elevated platform still more often appears in the Northern Valley. Only a friendly spirit, union of interests and intimate intercourse would lead them to avoid interiors and select the most accessible river valleys for their chief settlements. They certainly had nothing to fear from each other which could not have been the case had various governments controlled on the Scioto, the Wabash, the Upper and Lower Mississippi. Independent governments are necessary rivals in the early stages of civilization. The absolute rulers over nations of submissive slaves can not tolerate ambition in each other.

It seems probable that a peaceful union existed on a religious base, as in ancient Egypt, and that the kingly and priestly offices concentrated supreme control in one person, as in Peru. The fable of a descent from the Sun has secured a long and quiet lease of power to the royal families of various primitive nations on each continent. The indications seem to point to some similar fiction among the race of the Mounds, and this joined the Valley in a harmony and quiet unbroken till danger from the northeast, in the later days of their history, rose in formidable proportions, leading to the construction of the numerous fortifications from the Alleghany River to the Wabash. Their size and elaborate structure intimate powerful enemies and the danger of frequent attacks, while various hints of a sudden catastrophe suggest an overthrow so complete that no prolonged stand was made in the lower Valley.

It would be very natural that the seat of government should be near the meeting of the two great streams, on which were the principal masses of the people, and that the finest art relics should be found in that neighborhood. This last has actually been the case, in some lines. The signs of a dense population are numerous while the absense of fortifications intimates that no danger was apprehended, the line of the Wabash containing the nearest defensive works.

One of the pyramids of Egypt, if the ancient history is to be relied on, was built by the labor of three hundred and sixty thousand men, continued for twenty years. The great mound of Cahokia was one third the size of the great pyramid of Egypt, and several mounds in the Valley equal in cubic contents many of the pyramids of smaller size. Common consent, without other pressure, or despotic tribal governments that should have produced these great monuments, so numerous, so wide-spread, and bearing throughout the stamp of common ideas, would be impossible anomalies in history. The monuments of Peru and Mexico were due to general governments which controlled the details of private life and held the mass of the citizens as virtual slaves. It was undoubtedly the same in the Valley.

The numbers of this race must have been very large—some millions, at least. The size of the inclosures north of the Ohio testifies emphatically to the presence of multitudes. A sacred inclosure extending over four square miles was but one of scores in the Valley of a small tributary of the Ohio. There seems good reason to infer that at least a million people inhabited this part of Ohio and its immediate vicinity. Many thousand must have been gathered about every large platform mound. These evidences of a large population extend from the branches of the Alleghany River to the Gulf —a distance of 2,400 miles—running back on the tributary streams sometimes hundreds of miles with numerous centers evidently crowded with people. It was no thinly scattered population that left so many enduring traces of their presence along the thousands of miles of river valley.

It has been suggested that they commenced their labors on the Ohio and its branches, and, being driven thence by fierce northern tribes, retreated down the Valley. Many facts, however, are not in keeping with this supposition. Nothing is more striking in regard to the relics of the Ohio mounds than their southern origin. Much the larger portion, in numbers, were from southern waters. The pearls, the beads, made from shells found only on the shores of the Gulf, the mica, extensively mined in the mountains of the southeast, and the obsidian, from those of the southwest, indicate a lively trade with those regions. Besides, how could the rich valleys of the lower streams with their milder climate have failed to attract settlement when they could be reached from the north simply by committing themselves in primitive canoes to the current of the great streams?

The expulsion of the Mound Builders from the north, where they developed so much talent for military defence, should be indicated by a repetition of those defences if they made a permanent stand below; but of this there is no trace. They were evidently long threatened from the northeast, while the inhabitants of the central and lower Valley dwelt in security; but the danger suddenly burst out in uncontrollable fury. The miners left their work incomplete on Lake Superior; the fortresses were stormed and only a small part of the population about them probably escaped the general massacre. The remnant rushed down the Valley pursued by the triumphant foe, and the Mound Builders Empire suddenly collapsed. This history has often been repeated among the primitive nations. Just so the Empire of Montezuma fell, and the wise rule of the powerful Incas of Peru ended in sudden ruin.

A general unity and coincident occupation of the whole Valley is most probable, and this implies a very large population. This large population of unwarlike people would be no argument against sudden annihilation. Alexander conquered the countless hosts of the Persian Empire with thirty thousand men, and the Aztecs and Peruvians were overthrown by a few hundred European warriors. The savages by whom this Valley Empire must have been conquered probably pursued the same policy as the Iroquois of later times. Three distant branches of their own race, which were settled in Upper Canada between the Lakes, and on the southern shore of Erie, were suddenly attacked about the middle of the seventeenth century and annihilated. The dawning missions among the Hurons, from which the Jesuits hoped so much, were suddenly destroyed. Their presence and counsels and French protection could save but a miserable remnant of a once powerful tribe.

If the numerous and elaborate works of the Valley prove a large population they also furnish the strongest evidence that the crowded population could depend on abundant supplies of food. No hunter race could exist in such numbers or be brought under a control so complete as to give origin to the Mounds. The Indian tribes followed the game in its migrations, had only temporary residences, and could not spare time if they had possessed the inclination for such labors. The Mound Builders had a keen eye to agricultural productiveness, and all the sites of their works were located in the most fertile alluvial basins. The occurrence of mounds of observation and signal stations on prominent points, which were concealed and useless by the heavy forests on and around them, hints that the forest had been removed before the time of their erection. The heavy timber had been cut down and in its place, without doubt, were vast fields of corn and, perhaps, other grains.

The occurrence of charred corn on the altars of sacrifice seems to turn this supposition into certainty. The occurrence of ancient fields, sometimes called "garden-beds," in which regular rows, as of maize carefully cultivated, with a manifest division into distinct lots by a change in the direction of the rows, seems to favor this idea. The Indians were never known to cultivate with such carefulness and regularity. Only a cheap food could render possible the extra labors and public monuments of this race. Maize, or Indian corn, is a native of tropical regions, where it grows wild. It was probably introduced to North America by this race in their migration from the South, together with tobacco, which is a native of the Andes. The great number of pipes found in the mounds indicates that tobacco was a favorite luxury with the Mound Builders and widely cultivated. They are believed also to have cultivated beans and various vines.

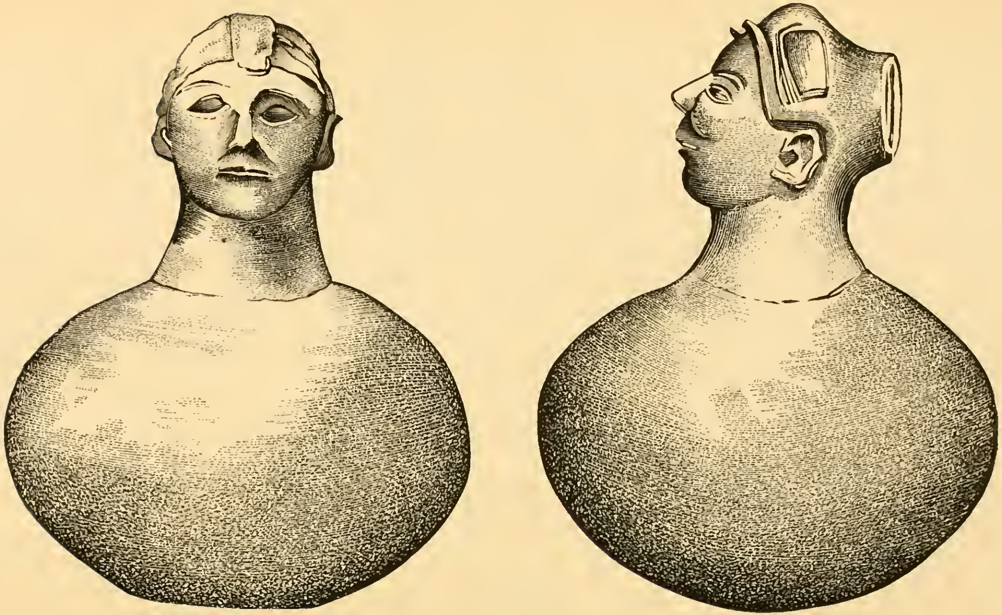
There are indications in places that they sometimes surrounded their cultivated fields with embankments of earth, and that on some of the streams they built levees to prevent overflow. Traces of roads and causeways have also been noticed on the affluents of the Lower Mississippi. Maize is so productive in the regions occupied by the Mound Builders that comparatively few persons could easily cultivate enough to furnish the principal food to thousands. It was the basis of their civilization, there is no doubt. The ancient dwellers in the fertile valleys exulted in plenty drawn from a careful and systematic cultivation that furnished all the food they could require.

On this unfailing abundance, drawn from the best watered and most fertile parts of the Valley, rose a variety of classes and a division of labor, without which advance in civilization would be impossible. The evidence is clear that the elements of engineering and of skill in laying out military works was considerably advanced. Accurate squares, angles, circles, and other figures on a scale often embracing many acres are frequent, and works distant from each other inclose precisely the same space. The corners of the platform mounds usually correspond with the points of the compass. A careful, measured regularity is a marked feature of a large part of the works, especially where they are carried out on a large scale. The genius of foresight and calculation, of preparation against a variety of disasters, indicates a class educated to the military life among a people to whom fighting was not agreeable. The extremely large scale of many of the fortresses indicates that there must have been many soldiers to defend them, and perhaps that they were places of temporary resort during an inroad of the enemy. Occasionally a town site appears to have been protected with walls; but usually the fortresses occupied the heights which offered the best natural facilities for defence. If wooden stockades crowned the earthworks, as is probable, they must have been very formidable to a savage foe. They probably sheltered the people for many generations against occasional attacks.

The arts of the Mound Builders did not extend to working stone in masses. For this the surface of the Valley did not furnish very abundant material, but their minor sculptures often indicate an observant eye, and, considering the materials and the tools, an extremely skillful hand. The Peruvians had learned the art of hardening copper with tin so that stone could be worked with metal tools. There is no indication of any such useful tools among this race; and yet the hardest stone was wrought into a great variety of forms. These works of art, in a great multitude of cases, are surprisingly true to nature. Most of the animals of the Valley and some never found in it were executed with rare fidelity and correctness of expression, in characteristic attitudes, and, when the material permitted, a high polish was added. Some of their works rival the best Peruvian specimens.

So striking are many of these works of sculptured art that some have refused to believe a people so primitive as they supposed the Mound Builders were, could have produced them. Seven different specimens of the manatee or lamantin, a curious marine animal, with two fore paws closely resembling a human hand, have been found. It frequents the shores and rivers of the northern coast of South America. Many other sculptures represent animals of the southern hemisphere, and their occurrence in the mounds of the upper Valley is considered extremely significant. Some have believed them imported, but equally skillful representations of birds and most of the animals of the Valley as clearly show that there were artists here quite capable of producing them after having once closely observed the originals.

Some unfinished sculptures suggest how the work was carried on, although the kind of tool used for cutting is a mystery. The outline was made as a whole, and the details for each part worked out together and in harmony—showing that a full picture was in the mind of the artist from the first—and the strokes of the cutting tool were bold and confident, displaying a well-skilled hand. Occasionally a humorous figure,



WATER-JARS, FROM MISSOURI.

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or a caricature, reveals the sense of fun in the maker and his success in reproducing his conceit. Much of this sculpture remains only as the ornamentation of pipes, although human figures have frequently been found, sometimes enshrined in shells, the central parts of which had been cut away. These have been supposed to be small idols, with how much reason is uncertain.

Much expression is often conveyed by the human faces and in the attitude of the form. "Nothing can surpass the truthfulness and delicacy of the sculpture," says one very experienced and intelligent observer; and it is declared that the ornamentation of urns, water-jars and various specimens of pottery is much superior to anything found in Europe in the "Bronze Age." Only in the "Iron Age" next preceding the historical era in Europe, is the same skill noted.

All this is fully in keeping with the intelligence and capacity manifested under other forms by the Mound Builders. All was characteristic of a peculiar, unborrowed and really important, advance beyond a barbarous condition, and indicative of a higher degree of culture than those are willing to acknowledge whose minds are filled with images of the colossal sculptures of Egypt and Assyria. They had laid a solid foundation for future progress by careful original studies, long and patient practice and a wide range of observation and experience. Their measure of advance was the more significant that they had the most serious possible difficulties to overcome by reason of their want of suitable implements with which to embody their conceptions.

We may justly assume that what has remained to our times of these very ancient products of industry and art represents but a small part of them when they stood in their full completeness. How little has remained to show the industry, the art, and the splendor of ancient Babylon and Nineveh, of Memphis and Tyre! A large part of our knowledge of them is derived from eye witnesses, or from those who lived in or near the same period. They had a knowledge of iron and how to work it so as to make it serve their industries. The horse, the ox, the camel and the elephant aided their labors; and the dry climate of countries surrounded by arid deserts tended to preserve monuments which they built largely of stone.

The climate of the Valley, on the contrary, is moist; the material of which its ancient people built their monuments was chiefly the soft soil, easily spread far and wide during the long course of two or three thousand years of storm and wind and frost. They had no beasts of burden ; they knew nothing of iron ; they had not even learned how to harden copper, as did the Peruvians later, and their more effective implements must be made of stone. They had numerous copper tools, but they were too soft for heavy work. Their axes and hoes and picks must be painfully shaped out of the more tenacious rocks ; their knives and graving implements they made, like the Mexicans, from flint and obsidian.

With stone axes, assisted by fire, they removed the heavy timber growth ; with stone hoes and other awkward implements they stirred the soil, cultivated maize, their staple food, which they varied with fish from the streams, near which all their works are found, and with game from the neighboring forests, slain by their flint-tipped arrows and spears. With how much toil and difficulty all this was accomplished it is difficult for us to conceive. It took more than half a century for the civilized pioneers, provided with the steel-edged axe, the serviceable plow, the light hoe, the sickle and the scythe, assisted by the horse and ox, to repeat their work.

They had houses to build with equally inefficient tools, they wove cloth from the fibres of plants for garments, they boiled salt at the "Kentucky Licks," they obtained copper from Lake Superior, obsidian from New Mexico, and heaped up, with laborious steadiness, multitudes of mounds and miles upon miles of embankments. But the rich soil responded readily to the touch of their cumbrous implements of agriculture and the labor of one supplied food for many. There was plenty for the rulers and their servants, their numerous priesthood, the thousands of soldiers who garrisoned the strongholds, and the multitudes who labored for the State.

A careful examination of the mounds shows that a large part of them were evidently connected with the religious institutions of the builders. The altars of sacrifice, found so numerously in the upper Valley, were replaced in the south by the truncated pyramid, or platform mound. These are peculiar to America and appear to have had their origin in the Mississippi Valley, since they are found in fuller development in Mexico and Central America. The pyramid, or platform mound, of Cholula, not far from the City of Mexico, is twice as large as the great pyramid of Egypt and supported a temple on its summit. It was on the top of such a mound in Mexico itself that the captive Spaniards were sacrificed under the eye of the helpless Cortez.

Stephens, who made an extensive and careful survey of the mysterious stone cities of Central America, remarks: "In Egypt no pyramid was crowned by a temple; there is no pyramidal structure in this country without it." The frequent presence of altars on these mounds in the South, their habitual position where multitudes could be gathered at their base, the graded ways leading up to their summits, and various other circumstances, point them out as devoted to the same service, although no stone edifices were erected on them, as in the countries further south.

They are one of the strongest links that connect the Mound Builders with the architects in stone in those regions where an obviously later and more elaborate civilization was developed. As the Assyrians had learned, in the soft plains of Chaldea, to construct earth mounds as a base for public buildings and transferred the custom to the rocky regions to which they removed, so, apparently, the habit of raising earth mounds in the soft and level spaces of the Valley was carried among the mountain plateaus by the Toltecs in their flight, and the skill they had acquired in the small arts of sculpture expanded into the adornment of the massive stone buildings with which they there crowned them.

The most striking feature of character, which the mounds prove was a leading trait of their authors, was their religious habit. It has been conjectured that they were ruled by the religious orders, or that the sacerdotal character was the base of kingly power. The Incas were the "Children of the Sun," and Montezuma was the high priest of his nation. Their religious institutions were probably more perfectly developed than any others. It is inferred from the distinct character of the offerings on the numerous altars of a sacred inclosure on the Scioto that they worshipped various powers, presenting to each a separate class of burnt offerings. Like most primitive nations they deified the forces of nature, and, chief among these, the Sun.

To catch the first rays of the god of day they elevated the mounds high above their habitations and perhaps, in the Mississippi Valley, contented themselves with a worship of the great luminary under the open sky. It was the beneficent source of life, fruitfulness and heat, and eternal fires were maintained in its honor. From this arose, in all probability, the sacrifices by fire that smoked on every altar in the Valley and consumed all that they held most precious. The Persians, the Phœnicians and Carthaginians, the Peruvians and Aztecs all worshipped the Sun as a principal divinity. The semi-civilized nations of the New World extinguished their fires at certain astronomical periods, rekindled them at the commencement of the new cycle, and the sacrifices then made usually included human beings. The Aztecs are said to have rekindled the fire on the breast of a living man whose heart was afterward torn out.

It is supposed that some of the mounds on the highest points in the upper Valley were places where the sacred fire was periodically renewed. They were, in such places, of stone, which give evidence of intense or long-continued heat, caused, probably, by the fires which were never allowed to expire but at the time appointed for renewal. The wonderful powers of nature, whose mysteries now engage the inexhaustible interest and intelligent researches of modern science, were extremely impressive to the early nations and none, perhaps, have failed to worship them under some form. The daily miracle of the sun's progress across the heavens and the various effects produced by it in the different seasons were especially noted with superstitious wonder and veneration, which led to institutions for its worship and the setting apart of a priesthood consecrated to its service, to the maintenance of sacred fires and to the presentation of offerings designed to honor or propitiate it.

Most of the races, whose passage from barbarism to semi-civilization has been noted, have been found to include human sacrifice among these precious offerings to the sun and other heavenly and earthly powers whose anger was feared or whose aid was sought. Few of the altar mounds fail to show evidences of the burning of human bodies on them, which gives rise to the opinion, among those who have studied them, that this horrible custom was prevalent among the Mound Builders. The bodies of the dead were burned as a part of the burial rites in all sections of the Valley to a large extent; yet that was only one of the forms employed, and the ceremony was evidently different in the burial mounds from that practiced on the altars. There can scarcely be a doubt that this ghastly form of worship was a part of the altar service, and that thousands of human lives have been ended here by violence at the hands of the ministers of religion. Perhaps their best and dearest were often so presented by this very religiously inclined race—" the fruit of the body for the sin of the soul"—as in ancient Palestine. The practices of the Mexicans on structures similar to the temple mounds shed a fearful light of suggestion on their uses.

That they failed to have a priesthood devoted to the care and service of the altars and temples is most improbable. With so large a number of different religious structures this class must have been well organized into a hierarchy, or succession of orders and grades. Twenty-four altars in one inclosure on the Scioto were consecrated apparently to different objects of adoration. One contained a crescent formed of round pieces of mica, which suggests offerings to the moon; another god was apparently appealed to by offerings of tobacco and pipes, more than two hundred in a charred condition being counted on one altar; flint arrow-heads, in great numbers, were the chief relics of another, as if a treaty closing a war had been solemnized, or the favor of the "god of battles" sought; other altars showed various offerings differing largely on each.

This organization of the religious sentiment has always been accomplished by, or accompanied with, an extensive development of a priesthood, and there seems no reason whatever to doubt that it occurred here, also. All experience shows the civil and religious powers united in some form in primitive civilizations, and in many cases the king or prince became religious as well as civil head. This was the case in both Peruvian and Aztec organizations, and may be inferred in the kindred race of the Mounds. A quiet and gentle race, such as these evidently were, has always been easily ruled through its religious susceptibilities. The great mounds and the larger sacred inclosures were probably the residences of religious dignitaries of the highest rank.

The many similarities of the Mound Builders and their evident institutions to the people of tropical America, who had advanced far toward true civilization in some ways when overwhelmed by the Spaniards, have been frequently noticed. The indications are fairly conclusive of extremely intimate relations between them. There are reasons for supposing such relations both before and after the building of the mounds. Wherever early civilizations can be traced back to their apparent origin they have led the inquirer to a tropical region —usually a healthy plateau or elevated valley.

This does not fail in the case of the Mound Builders. There is reason to suppose that the original rise above a barbarous condition commenced on the plateau at the eastern base of the Andes in the north of South America, whence the population wandered northeast through the isthmus, and south among the higher elevations of the mountains. The same general formation of the skull, the same general traits of character, seem to imply this. There is a wide distinction between the semi-civilized races and savage tribes that seems to prove a very early separation of the stock, or else a different original birth-place for each. The Indian tribes seem to have come from the northwest; the Mound Builders from the southwest.

Maize and tobacco are natives of South America, and were probably introduced by the Mound Builder race to North America. Along with these they brought a knowledge of tropical birds and animals, of obsidian, pearls, and copper, and this knowledge was probably maintained by subsequent intercourse in some way. The fact of some kind of intercourse is unquestionably established by the works of art to which similarities of character and physical structure give great significance.

The traditions of the Toltecans of Mexico indicate that they were once settled in a country to the northeast; that they were violently attacked by fierce savage tribes, and, after a war of thirteen years, completely overcome. Under several leaders they abandoned their country and made several settlements at different points in Mexico, but finally transferred the seat of their government to the Valley of Mexico. A variety of legends have been preserved by the early Spaniards relating apparently to the later stages of this migration. The oldest date in the language of this race is said, by the Abbé Brasseur de Bourbourg—who devoted himself with great zeal to the collection of all the information that could be drawn from original sources before they were quite scattered and lost—to have been 955 B. C. As this dates their advent to power in Mexico their wanderings must have begun about a thousand years before the Christian era. This was two centuries and a quarter before the first Olympiad—the starting-point of dates in Grecian history—and about two and a half centuries before the foundation of Rome.

How far this is to be relied on it is difficult to say. The Abbé Brasseur had learned the Nahuatal, or Toltecan language, and none of his successors among Mexican historians were competent to criticise his statements. We have already seen that a number of indications in the mounds point to the probability of about that age for their abandonment. Torquemada found in Mexico an old record describing these wanderers on their appearance in that country, "as a fine-looking, intelligent race, of industrious and orderly habits, and skilled in working metals and stones." There is much difference of opinion as to the trustworthiness of these records, but a general consent in the statement that they ruled Mexico for many centuries, during which they made notable progress in art and science, when their government fell into disorder and finally gave place to that of the fierce and bloody Aztecs who adopted much of their civilization but stood far beneath them in humanity and real culture.

During this long period from their first appearance in Mexico to their final subjection by the Aztecs, there was apparently, at all times, a confused state of migrations back and forth over the region between the Valley of Mexico and Central America, and it is believed by some that this race built the best of the mound temples with their singular sculptures in the forests and mountains covering the northern part of Central America, and that the Toltecs, the most truly civilized of all North American races, were the true Mound Builders. According to this view the primitive civilization of the Mississippi Valley was the original type—the base on which the Southern arts and culture of North America was founded. The evidence of a great advance from savage life has been noted, and facts, as well as such traces of history as can be gathered, unite in pointing to one conclusion. It is not, indeed, accepted as the only possible one; but the most careful research has discovered the largest number of indications of such a connection of events.

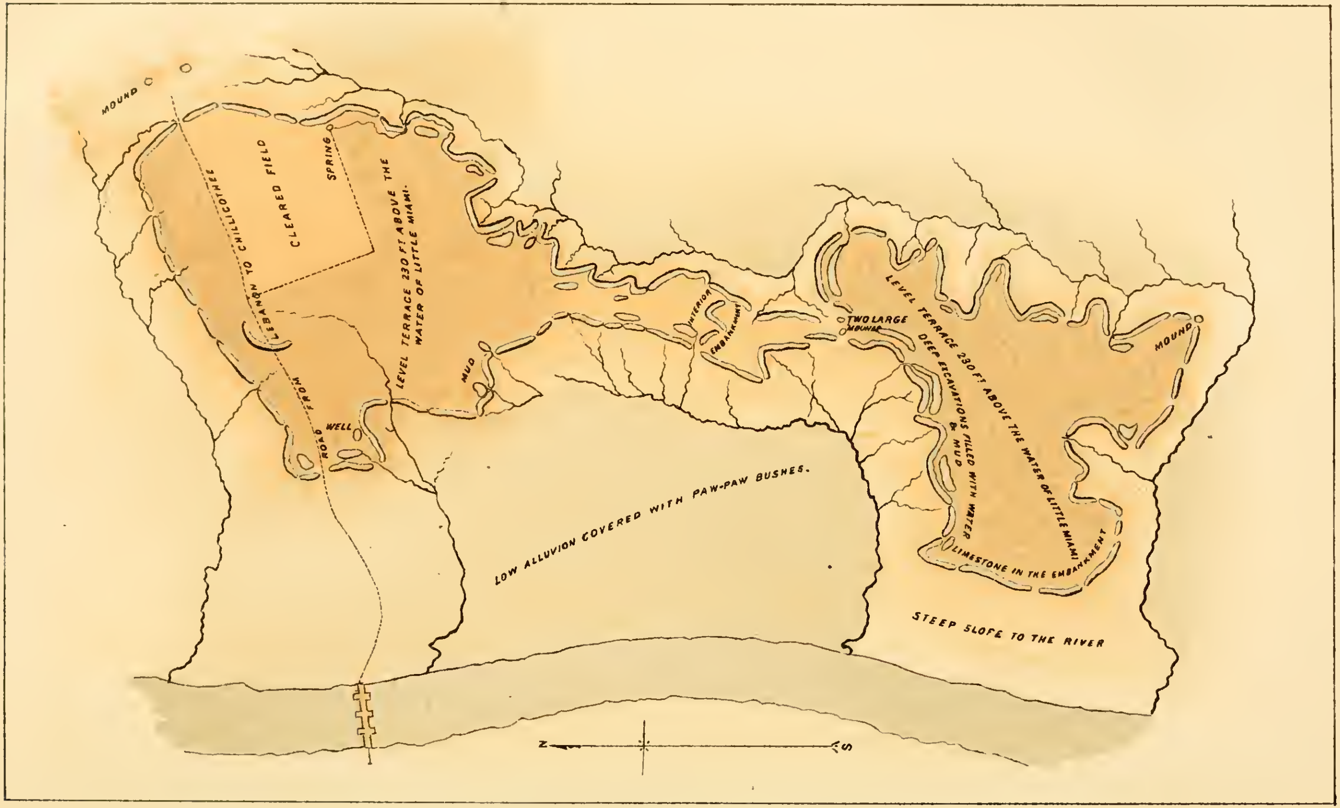
Such migrations have been very numerous in the history of the Old World, and the fresh impulse given by adventure, together with the mixture of races that has usually followed, have been among the strongest stimulants to more rapid and enlarged progress. The word Toltec is said to be still synonymous with *architect* in Mexican; the very numerous mounds point to the building tendency of an early people who had few tools or models; while Central American architecture indicates models not native to a rocky region and a very long previous training in sculpture, culminating there in the origin of hieroglyphic writing, and a really original and impressive style of architecture. To find such a state of progress in these directions in a confined region without a wider range of experience and a more various discipline than could have been received there would be indeed surprising. The literature of Western Asia and Europe was born of many removals and recastings of the primitive civilization. It does not appear to have been original in Egypt from which it was doubly transplanted—to Phœnicia and thence to Greece—before the perfect flower and fruit could be matured.

In the Valley of the Mississippi we find traces of singularly mature conceptions for so much backwardness in other respects. The elements of mathematical science are visible in the perfect circles, squares, octagons, ellipses and four-cornered mounds adjusted to the points of the compass; in the art of military defense, and in the surprising accuracy and truth to nature of the works of the sculptor and ceramic artist. They were on the high road to true culture and the religious tone of the great mass of their monuments stamps them as a thoughtful people. They suddenly disappeared from the Valley leaving little other trace behind save their maize, their tobacco and a very faint and uncertain tradition, if indeed it refers to them.

A degree of sacredness was attached by the modern Indian to the pipe and tobacco, which were favorite offerings on the mound altars, and still more closely associated with religious ideas in the minds of the Builders than in those of the Indians.

The Ohio was named by the modern Iroquois, but possibly the Mound Builders left their name, or the name of one of their tribes or provinces, to the Alleghany Mountains; although it appears impossible to tell whether or not that name is only the relic of a hunter tribe of which so many were annihilated by the fierce confederacy of New York. The elaborate defenses along the northern tributaries of the Ohio intimate that a struggle, lasting for generations, preceded the final catastrophe. This was produced by, perhaps, the strong Indian confederacy of the Five Nations and prolonged by the Mound Builders' fortifications. But suddenly the mines of Lake Superior were abandoned while they were yet engaged in raising a huge mass of ore and never, apparently, revisited. Unfinished altars remained forever uncovered; the fortress, the sacred inclosure and the temple mound became suddenly solitary, and the forest proceeded to reassert its control over them.

They must have been hotly pursued into the lower Valley for they did not rear there fortifications such as they had been


MOUND
LEBANON TO CHILLICOTHEE
ROAD FROM
CLEARED FIELD
SPRING
LEVEL TERRACE 230 FT ABOVE THE WATER OF LITTLE MIAMI.
WELL
MUD
INTERIOR EMBANKMENT
TWO LARGE MOUNDS
LEVEL TERRACE 230 FT ABOVE THE WATER OF LITTLE MIAMI
DEEP EXCAVATIONS FILLED WITH WATER & MUD
LIMESTONE IN THE EMBANKMENT
MOUND
LOW ALLUVION COVERED WITH PAW-PAW BUSHES.
STEEP SLOPE TO THE RIVER
N
S

FORT ANCIENT, East Bank of the LITTLE MIAMI RIVER,
33 MILES ABOVE CINCINNATI, JOHN LOCK SURVEYOR.

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driven from above, and indeed all their locations were extremely accessible to the swift bark, or log, canoe of the Indian. A miserable remnant of prisoners probably dragged out a weary and desolate life in slavery, while the more intelligent and enterprising spared from slaughter abandoned the beautiful Valley, nor felt themselves safe till they were hundreds of miles beyond the Rio Grande, and at length found themselves near the lake of Mexico. Like the central mountain plateau of Asia and the woods of Germany, the highlands of the Rocky Mountains seem to have sent forth swarm after swarm of fierce, warlike, and (in this case) wholly barbarous tribes, which flowed, wave after wave, eastward into the Valley and south toward Mexico. During some of these destructive attacks of the Chichimecs, as all the barbarians were called by the Toltecs, a colony fled to Central America for refuge and carried their architectural tendencies to a still higher and more perfect stage of development.

Such seem to be the reasonable conclusions from the facts revealed in earth and stone, and by the records of Mexican and Central American history preserved by Jesuit missionaries in New Spain. Apparently only a wandering tribe from the foot of the Andes could introduce maize and tobacco and a knowledge of the fauna of those tropical regions. The Valley was too thinly populated by the men who had been contemporary with the mammoth and mastodon to have any opposition raised to their settlement along the rivers of the middle and eastern Valley, and for unknown centuries they dwelt in security until the numbers and valor of the hunter tribes around Lake Ontario accumulated danger and, finally, ruin.

They were not to be left to build up a political and social structure here that might waste too many of the treasures of the Valley on the childhood of humanity and an imperfect civilization. These treasures must be held fairly intact and the ground kept clear for the utmost development of the civilization matured with so much pains and care around the

Mediterranean and on the shores of Western Europe. The quiet and busy agricultural dwellers in the Valley, after ages of undisturbed growth or, in later times, of successful defense by their superior intelligence, were suddenly found unable to resist the fierce, determined onslaught of the bravest of the Indian tribes. In all probability a few thousand warriors of the forest, knowing no mercy and delighting in the slaughter of the flying foe who had long resisted them by virtue of his fortifications, drove before them the millions of the Mound Builders as Alexander scattered the vast armies of Persian Darius.

What agonies of terror, what scenes of dreadful carnage, may then have been witnessed by mounds and prairies and streams, we can scarcely hope to know. Undoubtedly in great mental distress and bodily suffering the escaped remnant abandoned their fields, their temples, and the streams whose banks they and their ancestors had beautified by incessant toil. It must have been one of the most fearful catastrophes of warring humanity.

The retreat of the ten thousand Greeks, recorded by Xenophon, and the distresses of De Soto's little army after his death, must have been trifles compared to this exodus of the disheartened, terrified, and perishing remnant of a great nation. Their houses left behind decayed; their temples rotted and disappeared from the mounds; the forests reappeared over their pleasant valleys and hills and sacrificial altars. No one entered into their labors or reaped the reward of their painstaking industry. Their very names vanished from the Valley, unless it is recorded by the mountains forming its eastern boundary. The Valley rested in its weighty service to man until the people worthy of it should appear to build a mightier social and political fabric and make full use of all its varied and abundant sources of wealth. The Indian tribes left them essentially untouched.

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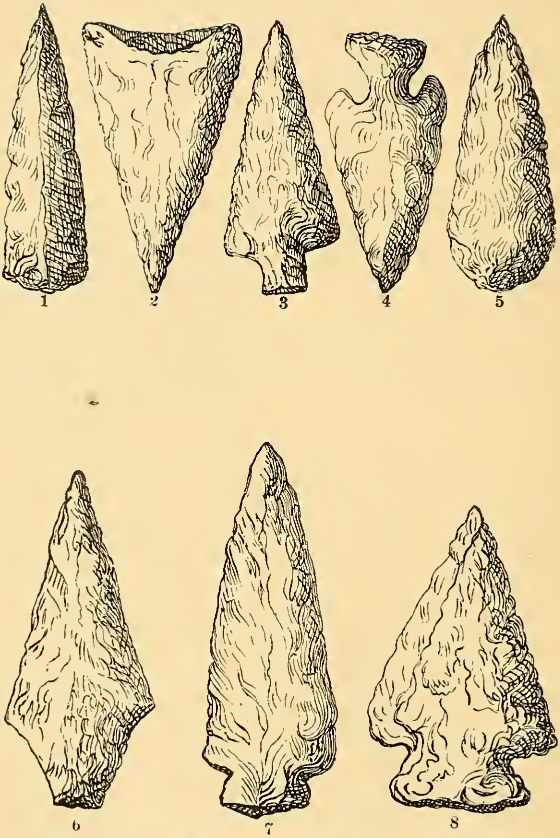


ARROW-HEADS, EUROPEAN AND AMERICAN.

PART SECOND.

THE INDIAN TRIBES AND EUROPEAN SETTLEMENT OF THE MISSISSIPPI VALLEY.

CHAPTER I.

THE WILD HUNTERS OF THE VALLEY.

A very different race from the Mound Builders held possession of the Valley when adventurers from Europe became acquainted with it. Almost without arts which deserved the name, depending chiefly on hunting, fishing, and the spontaneous fruits of the soil, for food, they spent much of their time in roaming from place to place, bestowing very little care or labor on dwellings temporarily occupied. The art of war, which, after hunting, they considered almost the only serious occupation worthy of a man, was, with them, equally simple. It consisted in sudden attacks on the enemy, in which success was largely due to surprise, and in the use of all the stratagems and feints which their ingenuity could devise, but never, when it could be avoided, in a fair and open contest.

It was conducted by small bands, rarely numbering more than a few hundred, who, having struck a decisive blow, or failed in the attempt, withdrew as secretly and rapidly as they had come. They, therefore, seldom fortified themselves, or they did so only when expecting the attack of an unusually formidable and persistent foe. They then contented themselves with a hastily-constructed stockade, or rudely strengthened a naturally strong position to defend themselves against a surprise or the first onset of the enemy. Some more warlike tribes, especially the Iroquois at the northeast, and some of the Mobilians, in the south, bestowed considerable pains on the defenses of the towns where they left their women and children; but, at the best, they were rudely constructed. The Indian warrior detested continuous labor as a restraint, and felt himself degraded by it. Unless immediately associated with his sports or his warlike occupations, he considered it only fitting for women and slaves. Consequently, he acquired little skill in construction when a somewhat more permanent residence, or the necessities of defense, induced him to undertake it.

The size and special structure of the brain has been found to determine the intellectual rank of the different races of men. The brain of the ancient Peruvian, of the temple builder of Mexico, and of the Mound Builders of the Mississippi Valley contains an average space of seventy-five cubic inches; that of the Indian eighty-three, and of the civilized Germanic races of Europe ninety. The mental force of the Indian is, therefore, midway between that of the Mound Builders and other semi-civilized nations of America, and that of the most progressive and intelligent modern race. But the brain of the Mound Builder was more symmetrical and indicated, by its proportions, less of the vigorous animal passions and propensities specially characteristic of the Indian. Accordingly the Mound Builder, the ancient Peruvian, Central American and Mexican exhibits less force of will, more docility, and, in general, more of the qualities necessary to patient and continuous labor. Thus, the low forms of civilization developed in Egypt, in ancient Asia and in America, sprung up among races inferior to the modern Indian, but, having a better balance of faculties—less energy of the passions in comparison with the degree of intelligence—better adapted to steady progress. They submitted readily to authority, could be combined in large masses, and all their physical forces concentrated to carry out the purposes of their rulers. Long and steady practice gives skill and develops intelligence whenever the nature of the work involves thought. Hence, their progress in art, manufactures and industry.

The Indian, with a stronger intellectual organ, but with livelier passions and more strength of will, obstinately resisted the control and restraint necessary to lay the foundations of civilization and maintain a steady growth of improvement. Subjection to the will of another and methodical labor were intolerable to him. With the same strength of the animal propensities and a higher development of the mental faculties, the Indians would, like the Goths, the Gauls, and other German tribes who overthrew the Roman empire, and like the Aztecs, who subdued the Toltecans in Mexico, have admired the arts and comforts of the race they conquered, and the Mound Builders civilization would have been the first stage of a more perfect organization of society, of government, of arts and of religion in the great Valley. But they were like children before intelligence and reflection have matured. The wild, free life of the woods and fields, liberty to rove from place to place at will, were irresistibly attractive to them. A structure of society and government that left the individual free from any constraint not imposed with his own consent was necessary to such a people. Their chiefs were clothed with no coercive authority. Their power rested on public opinion, their personal popularity and tact in peace, and their bravery and success in war. An Indian chief without eminence in personal and popular qualities would have no following and no power.

Even in war no coercion was employed and none was possible. Only those who chose joined a chief in a proposed expedition, and, even after having engaged in it, obedience to him was still substantially voluntary. An Indian army was strong only in its enthusiastic love of war, in its confidence in the leader and its assurance of victory. A repulse or other disheartening event showed it to be a rope of sand. Without shame or loss of reputation the Indian braves abandoned the leader in the expedition when it was no longer attractive to them or they no longer hoped for success.

A government that may not command or punish, that has no power to carry out its designs when popular enthusiasm declines, and which rests on the spontaneous support of a people in their mental childhood, could never originate, or preserve an inherited, civilization. There can be little doubt that it was the ancestors of the modern Indians—certainly a people like them—who destroyed the Mound Builder's empire and were unable to appreciate or perpetuate its arts and acquisitions, or to imitate them in rising above the wild and savage state. They remained the same from generation to generation. Their habits prevented any accumulation of material or mental treasure, and presented no solid ground on which the spirit of progress could rest its fulcrum and raise the descendants above the ancestors. The wisdom of the old men might, in part, descend to the next generation, but the obstinate attachment to their desultory habits did not permit the son to become, practically or usefully at least, superior to the father. Such as they were when they obliged the old Toltecs to abandon to them the fair Valley they continued to be when De Soto marched through the Gulf States to the Mississippi in 1539 and 1540, and when La Salle explored the Valley from the Lakes to the Gulf in 1682.

A certain rigidity of character and customs was a natural result of this perpetual mental childhood which gave entrance to no new ideas and repeated their wanderings and wars from age to age. This characteristic added greatly to the difficulty of a material change for the better, and, when they were brought in contact with the enlightened European nations, presented an obstacle to their civilization that has seldom been effectually overcome. They seem incapable of abandoning their ancient habits in the presence of a new situation, and they retreat before civilization instead of embracing it. This inflexibility is perhaps constitutional in the race ; but probably the constitutional bias flows from the mental structure noticed above—a want of symmetry and balance between the mental and physical attributes of the man. That it is not impossible to be at least partially overcome has been demonstrated among the tribes removed to the Indian Territory west of the Mississippi who have adopted the habits and enjoy the comforts of a tolerably high civilization. The same result is seen among individual Indians in other parts of the country, and to a considerable extent in Canada, especially among the descendants of the Iroquois.

The almost invincible attachment to their ancient customs corrected, in a singular degree, the dangers to civil and social order to which so great an aversion to restraint would expose any other community. The customs of their forefathers held the place of law to them, and no people, perhaps, were ever so little governed and so free from internal disorder. Respect for eminent ability, whether in speech or in act, among the multitude, was responded to by the chiefs in an equal respect for the personal liberty of all. Silver-tongued persuasion, glowing oratory, and emulous deeds were the immediate instruments of government. These were extremely effective, as may be seen in the history of King Philip, of New England, Pontiac, of Michigan, and Tecumseh, the Shawnee chief, who labored to construct confederacies among the scattered Indian tribes for the purpose of repelling the European invaders of their hunting grounds. They would, apparently, have succeeded but for the want of skill, war material, and discipline among their allies. These were capital defects, inherent in the Indian constitution and mode of life; but, in spite of them, the influence of these chiefs exposed the settlers to great danger of annihilation. Only superior arms, concert and skill saved the infant settlements from swift ruin.

In spite of the loose character of their government and the difficulty of maintaining concert of action and sustained concentration of energy, confederacies of many tribes were sometimes effected which produced important results. The best known, and perhaps the most effective of all, was that of the Iroquois, or the Five Nations, of Central and Western New York, who, for unknown generations, had ravaged and more or less completely conquered nearly a third part of the Great Valley.

Their union was constructed with much art, recognizing and turning to good account the special features of the Indian character, raising the Indian passion for war to sustained enthusiasm and evoking indomitable fierceness. They were as wise and politic in counsel as they were brilliant and vigorous in action, as may be seen in the history of their long contest with the French, and their success in balancing the French and English against each other for more than a hundred years, while maintaining their own independence and drawing much profit from their relations to each of the rivals. They were a significant example of what the Indian is sometimes capable, notwithstanding the unfavorable features of his character. Their victorious war parties roamed the forests from the borders of Hudson's Bay to the Carolinas, and held in terror all the other tribes from the Atlantic coast to the Mississippi. Had this confederacy been capable of a true union, of high military discipline, and a progressive skill in organization sufficient to have preserved, consolidated and firmly ruled their conquests, they might have repeated in America the history of the Romans in Europe, and have built up a vast and vigorous empire that would, perhaps, have deferred European occupation of North America for centuries.

But the Five Nations shared the defects of the other Indian tribes, and we must admire the wisdom and skill that developed so much strength out of materials which no art could really consolidate. Each tribe or nation of this confederacy was essentially independent and often made war and concluded peace without reference to the rest. Their grand enterprises were planned in a common council whose authority rested on the general consent and whose determinations any tribe or individual might freely decline to support. The Iroquois was still an Indian and maintained his freedom of separate action with invincible obstinacy. Union of effort depended on a singular community of habit, inclination and passion, and perhaps, also, in this case, in a hereditary talent for diplomacy.

Powerful and permanent confederacies were rare in Indian history, because these common sentiments were so readily turned against each other among the distinct tribes. The violence or caprice of an individual, or a small band, might involve the whole tribe in a bloody feud with any of its neighbors ; and to maintain harmony between any considerable number of tribes for any great length of time was a matter of extreme difficulty. That it was sometimes done demonstrates the great ascendancy which eminent diplomatic abilities might obtain over public opinion and how powerful an instrument of government a traditional policy could become among these sticklers for personal freedom.

There is a tradition among the Iroquois that, in ancient times, a strong confederacy, under eminent leaders, commenced a warfare with a numerous and powerful people in the West, whose mighty chief dwelt in a house of gold ; that they were often repulsed, and that the contest continued a hundred years, when the confederacy triumphed and the conquered people fled *down the Valley.* Indian historical traditions are not usually thought reliable ; but so great an event as the conquest of the Mound Builders, whose military fortifications indicate a resistance so stout and long continued, may well have made a deep impression and have been long dimly remembered. The Algonquin tribes, which were numerous and widespread both in the northern Valley and along the Atlantic coast, have also preserved a tradition among the Lenni-Lenapes—who are believed to have been the original stock of that race—of a somewhat similar general purport.

They represent their ancestors as coming from the West and finding a great people in the Valley of the Mississippi, of whom they requested permission to pass through their territory. This being refused, they commenced a contest, lasting for thirteen years, which ended in the expulsion of the ancient inhabitants of the Valley. It is possible that both these traditions had a foundation of truth, and relate to the same event; that a confederacy was formed by the wild tribes of the northeast to expel the peaceful Mound Builders from the Valley which they coveted for a hunting ground; that while the combined tribes of this section were engaged in the contest the Algonquins, and perhaps other races, approached from the west and united with them and thus brought on the great catastrophe which expelled a large population and an opening civilization from their long-established seat. It must have been a powerful combination of savage foes that so completely rooted out an organized and numerous people from their ancient homes. It has been conjectured by an eminent scholar, who made the Indian character, language and traditions a life-long study under peculiarly favorable conditions, that the Alleghans, who left their name to an eastern branch of the Ohio and to the mountains along the eastern border of the Valley, were the Mound Builders; but he assigns to them a more recent date than later researches have appeared to justify for the Mound Builders. The era of this expulsion must have been the heroic age of the Indian.

Apparently, the tribes of the northeast, decimated in numbers by a contest so long and wasting, retired to recruit their exhausted bands in their previously established homes, and the Algonquins, much more numerous, and, if the tradition may be trusted, less diminished in numbers from a shorter connection with the conflict, occupied the Upper Valley and spread themselves far to the north and east above the great Lakes and along the Atlantic, inclosing the diminished Huron-Iroquois tribes—reduced by so long and so great a war to a remnant—on all sides.

If these traditions contain a germ of truth, the burden of the contest occurred in the northern basin of the Valley, the conquered remnant escaping south, but, unwilling to trust themselves so near a warlike and pitiless foe, there organized an emigration in a body to their ancient homes in the southwest. Apparently, the Mobilian tribes, who were afterwards found in the Gulf States and along the Lower Mississippi, wandered from the Rocky Mountain region bordering Northern Mexico after the departure of the Mound Builders. This is indicated by some of their traditions, which describe a long series of travels from west to east, in which they were harassed by branches of the fierce Dacotahs or Sioux for many years. The high plateau north of Mexico, and the upper Rocky Mountain regions, seem to have been as prolific in hardy and savage tribes as Northern Europe during the later Roman period. Mexican traditions almost uniformly point to the north as the original home of her wild tribes, and those of the eastern and central part of the United States indicate as clearly a flow of immigration from the west.

The Natchez were the only people of the lower Valley who showed any signs of connection with the more civilized regions of the southwest. It is said that in their form of government, their religious system and their language, they differed radically from all the surrounding tribes, and that, in many respects, they bore the appearance of being a degenerate offshoot of the ancient Mexicans. Their traditions are also stated, by some authorities, to have distinctly affirmed their emigration from Mexico. They were so early extinguished, as a tribe, that they have not been as fully studied as the other races.

The structure and affinities of language are usually the most certain monuments of the pre-historic experiences of a people, and commonly furnish numerous suggestions and details of great value. By this means the ancient derivation, the wanderings, the relationships, and the gradual progress of a race in civilization, far back in the pre-historic ages, may sometimes be made out. The languages of American Indians, however, have quite baffled the researches of the student of the past, and wholly refused, as yet, to give up the secret of their origin. They contain few or no traces of an ancient civilization, or of a gradual formation by the mingling of two or more languages of distinct origin, as do so many of those of the Old World. Apparently, they had passed through the hands of no more civilized generations and ages than those of the people who employed them in modern times. Simplicity and want of culture evidently characterized the people who originated them, from the earliest times. No remodeling has produced irregularities of form, or omissions and condensations to render the expression more brief and less cumbersome. Their testimony seems to prove that they sprang directly from the powers and needs of primitive men who ever after maintained them in their original completeness and simplicity, adding no discordant elements and pruning off no unnecessary and cumbersome exhuberance. Indian language, therefore, in the judgment of the best recent authorities, unites with Indian manners, customs and monuments, in suggesting that if they were not originated on this continent they separated from the parent stock while in its infantile and undeveloped state, and that the Wild Hunter races are not a degenerate offshoot of a more civilized people.

The Indian tribes of the Valley, east of the Mississippi, were classed, by their affinities of language, as Mobilians—including the Creeks or Muscogees, Choctaws and Chickasaws—the Uchees and Natchez; the Cherokees; and the Algonquins, who occupied most of the upper Valley. Branches of

Iroquois tribes occupied the headwaters of the Ohio and the southern shore of Lake Erie, nearly to the western boundary of the State of Ohio. The Missouri and its tributaries, from far up in British America to Texas, was occupied by the Dacotahs, whose lands extended east to, and sometimes beyond, the upper Mississippi. One tribe of this stock was settled on Lake Michigan. Texas is said to have been occupied along the coast by offshoots of the Shoshone race, whose principal tribes dwelt in and about the great Utah Basin. North and northwest Texas belonged to the Comanches. The great Valley and its borders could not fail to be a pleasant residence for these Children of Nature. Its forests, prairies and streams supplied all their wants, and its mild skies saved them from the suffering experienced by dwellers in a more rigorous climate.

These various distinct nationalities or classes of tribes of the Valley, so distributed, must have made their appearance there very long before they were visited by Europeans. The divergence of language among the widespread branches of one stock required the lapse of many centuries of local separation. Few legends were current in regard to their original settlement in the Valley, and we can not place unreserved confidence in those few. There were few popular and general traditions of their original migration from other regions. They had buried unnumbered generations of their fathers here, and the memory of their origin had retreated, at least for the multitudes, into the thick darkness of the distant past. Changes in habits and manners had been few and unimportant. The tribes of the Valley generally cultivated corn and some other vegetables, without, in any instance, renouncing their habits as hunters, or making any important advance toward civilization. The tendency to an almost exclusively *physical* life, which is indicated by the distribution of the brain in the whole race, appeared in the history of all the tribes—under the warmer sun, the briefer and milder winter and prolific soil of the South, as well as in the more rigorous climate and scantier vegetation of the North. The Southern tribes, indeed, did not need to wander so far, and had, or might have had, more permanent homes, with their greater abundance of resources in a smaller space, but, at least when the epoch of English settlement arrived, they were not very appreciably different from the rest. They were incapable, it appears, of improving their fairer opportunity of making a real progress. Such as they must have been when their forefathers conquered the Mound Builders, they were, substantially, when the Star of Civilization rose out of the Atlantic to introduce the dawn of a new era.

CHAPTER II.

DISCOVERY AND EXPLORATION BY THE SPANIARDS.

Columbus lifted the veil that concealed the New World from the Old in the last part of the fifteenth century ; but it was nearly three centuries later that the people for whom the Valley had been reserved appeared to take permanent possession. The Spanish discoverers were fresh from the conquest of the Moors, and overflowing with the spirit of romantic enterprise and religious zeal which that crusade had awakened. The great discoverer had been in his grave but a few years, his followers were scarcely yet firmly settled in possession of the beautiful and productive tropical islands lying between North and South America, and they were still ignorant of the gold and silver of Mexico and Peru that were soon to draw them like vultures to their prey, when the vicinity of Florida attracted them to examination, without, however, offering any of the substantial rewards to these high-born freebooters which they especially sought.

Yet they gathered some marvelous tales from the simple natives and a hint of the great interior Valley which would probably have led to speedy exploration, and possibly to settlement, had not the booty to be gained in more southern regions soon drawn their attention away. Still, several abortive expeditions in various parts of Florida were undertaken, and the wealth of the unfortunate Mexicans and Peruvians only deferred more vigorous explorations. The sixteenth century was distinguished in the annals of the Valley as the period of Spanish exploration, as the seventeenth was for French discovery and settlement, and the eighteenth for the appearance of the Anglo-American who was destined to inherit all its beauty and wealth.

During these three centuries Europe was passing rapidly through the transformations by which the germs of the middle ages ripened into modern civilization and culture. The Spanish, French and English displayed in the Valley the characteristic features of three epochs of development—mental, moral and economic—which marked the transition of Europe from a rude and confused state to the clear conceptions and harmonious growth of the present century.

The Spanish period was imbued with the spirit of the Crusades which had animated Europe, more or less, for four hundred years. The Spaniards may be called the Last of the Crusaders—who slew infidels for the love of God—but it was the crusading spirit degenerated and overmastered by love of gain in the soldier, whose violence was winked at by the ministers of religion, partly because they did not fully see the wrong of it, and partly because it was uncontrollable. The Spaniards had just completed the Moorish wars, which were partly patriotic and partly religious, and from which they had secured great gain by the expulsion of the Mohammedans and the possession of their estates. It was an attractive form of piety to rude warriors. The ebbing waves of the Moorish war swept away the elegant civilization which the followers of the Prophet had maintained in the Spanish peninsula for eight hundred years, and left the Christian cavaliers in possession of their cities and lands, and full of enthusiastic eagerness to enter on new conquests for religion on similar terms. A fierce and sanguinary religious zeal, in their eyes, atoned for the injustice of taking possession of the property of others and slaying them, or reducing them to the hardest servitude, unless they became converts to the faith.

This brutal and hideous barbarism in a civilized Christian people is impossible in our humanitarian age, which shows how much the ideas of men have been reformed in three centuries. It was not civilization or Christianity; they are the chief humanizing and benevolent influences to which progress is due. It was animal force trained by social progress to most destructive energy before the principles of truth and justice had become clear enough in the mind to control it. The French Jesuits of the next century met and subdued the Indian by mental, rather than physical, force; a sense of justice usually characterized the Anglo-Americans of the eighteenth century and founded the American Republic; and our own century is fast making physical force and the passions of men the servant of humanity. But the Spaniards, in the Moorish war, in the outlawry of the Jews, in the torturings and burnings of the Inquisition, in the use of fire and sword to destroy heresy in the Netherlands, and the French in the massacre of St. Bartholomew and the persecution of the Huguenots, believed themselves praiseworthy as destroyers of the enemies of God and true religion.

This bloody faith was in full vigor in Southern Europe when the New World was discovered, and the resistless force of gunpowder and military discipline enabled a handful of these stern and mistaken warriors—enthusiastic to extend the area of Christianity and win converts at the sword's point—to overthrow armies and empires in America. In vain did the devoted but naked valor of thousands strive to destroy by numbers, and their primitive weapons, the few hundreds of the cruel invaders. Gunpowder, discipline and steel were irresistible. To the inexperienced natives the invaders—who profaned every object of their veneration and robbed them of their treasures and their liberty with every circumstance of cruel violence when they spared their lives—must have seemed incarnate fiends. The Spanish conquests and explorations in America in the sixteenth century are a painful comment on the religious zeal which left ambition and greed free for such horrible excesses.

Spanish exploration in the direction of the Mississippi

Valley was commenced by Juan Ponce de Leon in 1512. He had been one of the companions of Columbus. Approaching the coast of the continent on Easter Sunday, called by the Spaniards Pascua Florida, he named it Florida for that reason and because the shore was then brilliant with flowers. It was the peninsula which still bears that name. He heard a marvelous tale of a fountain whose waters would restore to the aged the energies and attractions of youth, and, fired by curiosity and ambition, returned to Spain to obtain from the king authority to settle and rule the lands he had discovered. This obtained, after a long delay, he again approached Florida in 1521, in two vessels, with the men and means to found a colony. He was received with hostility by the natives, was himself mortally wounded in a conflict with them ; many of his people were killed, and the enterprise was abandoned.

In the previous year, De Ayllon, another Spanish captain, landed on the coast of South Carolina. He was received by the natives with unsuspecting friendliness and hospitality, which he rewarded by decoying many of them on board his vessel and at once setting sail for St. Domingo, where he sold them as slaves for the plantations and mines. He had the hardihood to return to the same place again but was driven off by the indignant Indians.

Gold, in small quantity, had been found among the natives in these expeditions and another Mexico was believed to lie in the interior. While Cortez was pursuing his conquest of Mexico, Pamphilo de Narvaez had attempted to rival and arrest him. He led several hundred men into Mexico to supplant Cortez, but was overcome by the skill and rapidity of that able captain. His little army joined Cortez who dismissed him without harm other than what he received in battle.

Some years later—in April, 1528—De Narvaez succeeded in collecting a force of three hundred men and eighty horses, with which he landed on the west coast of Florida. He eagerly inquired of the natives for the "Land of Gold." The simple hunters did not know of such a country, but, alarmed by the presence of a force so formidable, encouraged him to look for it further on. There being little worth plundering among these roving tribes, he pushed his way through the morasses and swamps of this low, sickly region, trying to find a clue to the object of his hopes for six months, when, disappointed in his ambition, and perishing with toil and famine, he attempted to reach Mexico by sea. He was shipwrecked on the coast, and but four or five of his followers, after long wanderings, reached their countrymen.

So many disasters and the great attractions of Mexico, Central America and Peru, turned attention from the Valley for nearly ten years; but it was still believed that there was, somewhere in the Valley region, treasure worth plundering and a people sufficiently civilized to be worthy of the steel of the cavalier and the zeal of the priest. Ferdinand de Soto had gained fame and immense wealth with Pizarro, in Peru, and, being made Governor of Cuba, he determined to increase both by the discovery and conquest of this supposed wealthy nation in the Valley. Raising his standard for this purpose in Spain, he collected nearly a thousand followers, many of them being nobles and grandees. Elaborate preparations were made. Two hundred and thirteen horses, mounted by chosen cavaliers, stores of all kinds, among which were hogs, cattle and mules, were provided. It was a much larger and better appointed expedition than those with which Cortez and Pizarro had conquered the warlike Aztecs, and the well organized kingdom of the Incas. De Soto landed in Tampa Bay, on the west coast of Florida. This was in June, 1539.

A company of priests, who were to labor for the conversion and instruction of the natives, were added to the expedition and gave it the air and meaning of a crusade. A pack of blood hounds, for tracking fugitive natives, added to the cruel significance of the array. This imposing little army, of which great things were expected—including a fresh conquest to the church and the state, much renown and great wealth —was landed, in high hope, from the five vessels which brought it and its bountiful stores. The vessels then went back to Cuba, with orders to return to Pensacola Bay with fresh supplies in October of the following year. He marched north, constantly attacked by the Indians, multitudes of whom were slain, and others captured to carry the baggage and perform the menial offices of the camp. De Soto spent the winter near Tallahassee. A Spaniard, who had been a captive among the Indians since the expedition of Narvaez and learned their language, served as interpreter.

Constant inquiries for the Land of Gold were usually answered by directions to go toward the northwest. One poor Indian, more frank than the rest, declared that he knew no such country, and was burned alive, as intending to deceive. Thus, strewing his route with cruelty and death, this crusading captain pursued his way, when spring opened, toward northern Georgia. Most of the tribes, awed by his formidable force, received him with apparent friendliness, and many with the truest courtesy and kindness. All submitted, without resistance, to his demands for food and for slaves of both sexes to serve his army and carry its baggage. Submission did not always save them from shameful treatment. Passing through middle Georgia he sent an exploring party into the more mountainous north, but, as they found no cities or gold, he marched southwest across Alabama.

About a hundred miles from the Gulf coast was the Indian town of Maubila, surrounded with a palisade fortification. Its chief received the strangers with the usual courtesies, but he was more resolute, warlike, and powerful than the rest, and he secretly proposed to destroy his unwelcome guests. A part of De Soto's army, with the baggage, was in advance of the rest, and no sooner had the stores been lodged within the town than the Indians closed the gates and began the attack on the advance guard. In the surprise and desperate fight that ensued 2,500 of the natives are said to have been killed. The Europeans conquered after a struggle of nine hours, during which the town was fired, the baggage consumed, and many men and horses killed. The conquerors were in bad plight. The aim of the promising expedition had failed, the provisions and baggage were mostly lost, and only hostility could be expected from the Indians in the future.

It was now October, 1540. De Soto had been about a year and four months in the country, and his vessels, with supplies, lay in Pensacola Bay, not far from a hundred miles distant. But De Soto was worthy of being called the peer of Cortez and Pizarro. If unflinching determination and cruel bravery could have given him success, he must have gained it. His followers were discouraged, and wished to abandon a hopeless quest. To go to his vessels was to renounce the chance of fame and riches; he determined to turn his back on supplies and home, and make a fresh attempt. His stern decision subdued discontent and awakened confidence; his followers submitted to his will and followed him to the northwest. He spent the winter in Mississippi, where a night attack of the Indians surprised his troops in their beds, their light cabins were set on fire at the first onset, and many escaped only with their lives.

Their means of protection and defense were now greatly reduced, but, repairing the damage, as far as possible, they wore away the winter in frequent contests with the natives, whom they despoiled of food to sustain themselves. In the spring De Soto resumed his route, crossed the Mississippi in the neighborhood of Memphis, his force still sufficiently formidable for self-protection. They were the first Europeans who beheld the Great River. De Soto wandered over the western Valley, in search of a people worthy to be conquered, for a year, in vain. He pushed far back in Arkansas and to the borders of Missouri, and returned, broken in health and sick at heart at the failure of all his hopes, to die on the banks of the Mississippi, May 21, 1542. His diminished and disheartened followers now thought of nothing but how to escape with life from the fatal Valley. They first sought to reach Mexico by land, but found the difficulties so great that they soon returned to the river, built boats, in which they descended to the Gulf, and coasted along Texas to the settlements of their countrymen. Of the army, nearly a thousand strong, which had landed in Florida, three hundred and eleven escaped the perils of the wilderness, the vengeance of the Indians, whose retaliation they had provoked, and the dangers of the Gulf.

About twenty years later St. Augustine was founded, and in the course of time settlements were commenced in Texas; but these were more for purposes of barter with the natives and to shut out other European nations, by taking nominal possession, than from a real design of actual occupation and use. The disastrous termination of the two expeditions—of Narvaez and De Soto—convinced the Spaniards that there was no civilization worthy to be overthrown, and no considerable amount of gold within reach in the Valley. The real wealth of the Valley had no attractions to them. It did not encourage those who sought unlawful gains, and its savage tribes refused to become slaves. Thus, the old immoralities and evils of European life took no root here. The resources of this region could be really developed only by an industrious and thrifty people, at first almost entirely agricultural. Any other must have but a slight and temporary hold upon it. When the right people came it gave them more than the wealth of the Indies.

CHAPTER III.

THE FRENCH IN NORTH AMERICA IN THE SEVENTEENTH CENTURY.

While the Spanish were following up their conquests and discoveries of wealth, from Mexico to Chili, by a severity of rule that soon destroyed the blooming civilizations they had found, Europe was passing through an important change. The germs of a new learning and wisdom had matured very significant fruit, and the seventeenth century gave evident signs of the near approach of a new and more perfect development of civilization. The institutions and habits inherited from the past still embarrassed some forms of this growth in the Old World, and many sought both religious and civil liberty on the New Continent. The English colonies along the Atlantic coast laid the foundation of new institutions early in the seventeenth century, which were to be fully organized late in the eighteenth, one hundred and fifty years after.

Changes among the Anglo-Saxons were the measured and consistent result of tendencies firmly established in their character, and developed from the primitive institutions of the race. They reached a late but most noble maturity. The French, on the contrary, were quick to respond to a new movement or tendency from without, and, for the time, became its most complete embodiment. Rapid in thought and enthusiastic in following out a theory to the farthest results permitted by circumstances, the pulse of change was always first felt by them, and its direction indicated more clearly than by any other European nation. Anglo-Saxons were averse to change until all was ripe for it; the French at once discarded as much of the old as possible, and quickly adjusted themselves to the new—putting theory into practice with rapid completeness. They were the first in the eighth century to catch the spirit of a new modern civilization, and hastened to organize it in the great empire of Charlemagne. When the concentration of power in a single administration was interrupted by the growth of Feudalism, they developed that system in greater completeness than in any other country in Europe; when the strengthening of the royal power was required to overcome the abuses of that system, the French king became soonest an absolute ruler; and when theories of republican liberty were promulgated in the latter part of the eighteenth century, the eagerness of the French people to embody them overthrew the throne, the nobility and the priesthood by one vast explosion.

This French habit of catching the first breath of social and political or other change, reducing it to a consistent system, and at once seeking the end with too little regard to the means, was very characteristically shown in America in the seventeenth century by many of the most prominent representatives of that nation who visited the New World. The plans of Champlain, and of the French Jesuits who accompanied him, at once took in all of the continent with which they were acquainted, and which they thought it desirable to control. Instead of building up quietly and solidly on the coast, as did the English, their first care was to penetrate to the interior and form relations with the Indian tribes nearly a thousand miles from the sea. Important missions, that had a political as well as a religious aim, were immediately commenced on Lake Huron, above the western center of the Valley, to which the English did not attempt to penetrate for more than a hundred years.

The Age of Physical Force had culminated in Europe, and the Age of Mental Force began to dawn. As usual, the French at once recognized the new tone, and became its first eminent representatives. The system of the Jesuits was one remarkable form under which mental and moral force was first substituted for physical coercion. The nation which, in the last half of the sixteenth century, produced the horrors of the massacre of St. Bartholomew, in the first half of the seventeenth, adopted a mild and humane Indian policy that made almost every red man their friend, and furnished a long list of Jesuit missionaries, animated with the lofty spirit of martyrs. They shrunk from no dangers or sufferings, and calmly submitted to the cruelest tortures and death, to which, indeed, they looked forward when going hundreds of miles from all civilized companionship, among the most ruthless of mankind.

This spirit in the French commanders and priests was precisely the opposite of that which had moved the same classes of Spaniards in the previous century, and, usually, in the long run, secured the absolute trust and devotion of the Indian tribes. It was in this spirit that the French undertook the exploration of the Mississippi Valley, about the year 1673. The Jesuit missionaries had, some time before, established missions near the outlet of Lake Superior and on Green Bay. Marquette, a French priest, accompanied by Joliet, a trader, and five other Frenchmen, aided by the Indians of Green Bay, carried two frail Indian canoes across the portage separating the Fox and Wisconsin Rivers, and floated down the latter stream to the Mississippi, undeterred by the earnest remonstrances of the Indians, who represented that they were rushing into unknown but terrible dangers. They were the first white men to furrow the upper waters of the Great River.

Amazed, delighted yet awed by the vast and magnificent solitude, they descended the river to the Arkansas, not far from where the unfortunate, but ruthless, De Soto had met his fate and been buried in its waters. They discovered no traces of men on the way until they reached the lower boundary of Iowa. Here a pathway showed signs of human presence. They came as friends to the Indians of the Valley; for it was the principle of the French in America through this century to make the red men their allies and aids. They relied on the influence of mental superiority to control them. Marquette and his companions did not, therefore, hesitate to follow up these traces. Fourteen miles, it is related, from the Mississippi they found a band of the tribe of the Illinois. The fame and good name of the French had preceded them in the northern Valley, and they were received with friendly and solemn enthusiasm. These Indians freely gave all the information and aid they could to the white strangers.

Cheered and comforted by the sympathy of the simple natives, and furnished by them with the "Pipe of Peace," to secure them a friendly reception from the fierce tribes below, they proceeded on their way; but the route was too long and the unknown dangers were judged too great to attempt to reach the mouth of the river. From the Arkansas they retraced their weary way to the mouth of the Illinois, which they ascended to Chicago, holding friendly intercourse with such of the prairie tribes as they met. Launching their barks on Lake Michigan they coasted back to Green Bay. Such was the adventurous and trustful daring of the French Jesuits.

The Great River and the beautiful Valley were now definitely comprehended, and the genius of the French for bold and far-reaching plans at once sprung into play. In Canada the French were confined to the St. Lawrence and its tributaries by the English settlements of New England and New York. More than one French governor cherished the plan of attempting to gain possession of the valley of the Hudson for the sake of a better seaport on the Atlantic than was furnished by the St. Lawrence, which was closed by the ice several months in the year. These plans it was impossible to execute from the hostility of the Iroquois tribes and the superior development of the English colonies. They now formed the great plan of connecting the settlements on the St. Lawrence with the Great Valley, and so surrounding the English colonies from the rear.

This idea first became a clear and fixed purpose with Robert Cavalier de La Salle. He possessed the true French genius for bold generalizations with a resoluteness and active energy that would be daunted by no misfortunes or difficulties. He was fired with a lofty enthusiasm by the report of Marquette and Joliet, immediately conceived a grand enterprise, and spent the remainder of his life in a vain struggle with men, nature and accident, to realize it. In his clear practical sense, his manly resolution and inflexible obstinacy, he was perhaps more English than French. Too unbending to conciliate, he found many and powerful enemies. But for them he would probably have succeeded in firmly planting the wrong people on the Great River and its branches, and in greatly changing the destiny of the Valley, as well as in deferring considerably the rapidity of European as well as American development. That he and his successors failed was well for the liberties and progress of the world; for the complete success of his comprehensive plans would have made the fairest part of North America, with its incalculable wealth, French instead of Anglo-Saxon; and this New France, or Louisiana—colonized a hundred years too soon—would have included too many of the vices of the Europe of the Middle Ages. A watchful intelligence, with a steady purpose, still shielded the Valley from premature settlement.

We can not fail to sympathize with the disasters and disappointments of La Salle and to feel indignant with the bitter enemies who neutralized so much fortitude, heroic energy and patriotic ambition, although his success would have been a great misfortune for America.

Sustained by the approval of the Governor of Canada and the French ministry, La Salle, about 1678, collected his resources, mortgaged his estates and borrowed of his friends, to equip an expedition for thoroughly exploring the Great River. The length of the route, the malice of his enemies, and the unfriendliness of circumstances, interfered with his designs again and again ; but difficulty only served to strengthen his resolution. He built a vessel of sixty tons above the cataract of Niagara and freighted it with furs on the borders of Lake Michigan. The sale of the furs was to furnish him fresh supplies for his expedition. The vessel and furs were lost, and various other disasters occurred to delay his voyage down the Mississippi to its mouth until 1682. Arrived then at the mouth of the river he solemnly took possession of the country in the name of the French king, Louis XIV.

He had already sent Hennepin, a Franciscan priest, to explore the upper river. Hennepin ascended as far as the Falls of St. Anthony. La Salle established a fort and trading-house on the Illinois River, near Peoria. He had set his resolute will on the establishment of a colony at the mouth of the river ; and he now retraced his steps, as fast as the difficulties of the ascent against the current and his own illness permitted, and regained Mackinaw. The security of his little colony in Illinois and the protection of his Indian allies from the Iroquois, whose war parties roamed over the broad prairies almost to the Mississippi, detained him another year in the Valley, when he returned to France. He had passed over more than 4,000 miles and back, through the territory of multitudes of Indian tribes, and safely returned, mostly in frail canoes, with but twenty-two companions, and depending, in large part, on the hospitality of the Indians for supplies of food. Evidently, the humane and friendly spirit of the French brought its reward.

Received with honor at the French court, in spite of the active efforts of formidable enemies, La Salle soon organized an expedition for founding a colony at the mouth of the Mississippi. He reached the neighborhood of the river with his vessels, containing 280 persons, soldiers or settlers, by the first of the year 1685 ; but the commander of the vessels was in the interest of his enemies, they missed the mouth of the river by sailing too far west, the commander would not return to search for it, and landed La Salle and his colony on the unknown shore of Texas. And now misfortune followed misfortune. The Indians proved unfriendly, his store ship was wrecked and a large part of his supplies lost, and other stores were carried off by the traitorous commander who sailed for France, leaving La Salle and his colony in their great distress. Seeing no alternative, after two years spent in seeking the River and struggling against disaster, he started for Canada to procure aid. Calamity roused the evil passions of some of his companions, and, in the wilds of Texas, La Salle was murdered by one of his own people, March 17, 1687. His colonists were mostly massacred by the Indians, and thus, of the heroic efforts of so many years, little remained but a knowledge of the Valley and of its beauty.

In 1699, D'Iberville, a French Canadian naval hero, succeeded in accomplishing what La Salle, by no fault of his own, had failed of doing. He entered the mouth of the river, March 2, and established near it a permanent colony of hardy Canadians. For nearly a century a large part of the Valley, belonged nominally, to the French.

D'Iberville built his fort in the last year of the seventeenth century at Biloxi, some distance east of the mouth of the Mississippi. In the next year a fort was erected on the river above its mouth, and Le Sueur ascended to the mouth of the St. Peters, in Minnesota, in search of mines. In 1701 Mobile was founded by D'Iberville. French priests, traders and "coureurs des bois"—wood runners, or hunters—became familiar with a large part of the Valley east of the Mississippi. Could La Salle have lived and received the full cooperation of the government and people that his broad plans merited, French power might have been firmly settled in the Valley. The settlement of Canada was due to the energy and capacity of Champlain. An able leader, spared to guide and plan for twenty or thirty years, could have done still more for Louisiana.

But the French Government was too absorbed in European politics, court intrigues, financial difficulties, and foreign wars, to pay much attention to its American possessions till it was too late; monopolies and official corruption, both at home and in the colonies, prevented healthy growth, and emigration was not made attractive. Besides, the French people loved "La Belle France" too much to emigrate in large numbers. Inspired, for the moment, by brilliant theories and prospects, the French have often undertaken more than they could reasonably hope to accomplish. With only spasmodic and inadequate care from home, arbitrarily governed in the colony, a few thousand colonists were lost in the wilderness and ambition and industry shrunk to narrow limits.

Anglo-Saxon energy and self-dependence would probably have laid a broad foundation for future growth. The pliant yielding to circumstances and the courteous tact that recommended the French to the Indians sprung from traits of character that unfitted them for overcoming the great difficulties of such a situation. There were too few Champlains and La Salles, the Jesuits became ambitious of wealth and power, lost their great religious zeal for the conversion of the Indians in the Valley—whom they, indeed, found most unpromising material for organizing into strong communities—and became unpopular both in Europe and America. The embarrassments to individual enterprise in the French colonies left a blight upon them which they bore with a tranquility and patience not favorable to progress.

All these and some other causes prevented the French occupation of the Valley from becoming much more than nominal, and still left it free for the energetic agriculturists who were, by and by, to find their way to it over the Alleghanies. So slowly did the interior settlements increase that a census, taken in 1799, showed "Upper Louisiana" to contain less than 5,000 white inhabitants. That same hundred years had seen the English on the Atlantic grow up from a few scattered settlements into a great nation.

CHAPTER IV.

ENGLISH EXPLORATIONS IN THE VALLEY IN THE EIGHTEENTH CENTURY.

While Spanish visitors to the Valley in the sixteenth century were in search of treasures which would enrich the adventurer, and of kingdoms worthy to be conquered and Christianized by the sword, and French enterprises looked to permanent occupation through alliance with, and conversion of, the Indians by persuasion, the English intruder paid no more attention to the natives than was unavoidable, and rather sought a *home* than the realization of far-reaching plans. He was not an adventurer but an emigrant ; he was founding a commonwealth in diligent, serious earnest. This was a very modern feature and indicated a rapid evolution of the principles of true civilization.

The revolt against the foolish and repressive policy of European governments was based in England on a widespread intelligence and the resolute character of the individual Englishman. In France it was a flowing and ebbing wave that now yielded passively to obstacles and again gathered all its strength to rush against and overthrow them. During the first three quarters of the eighteenth century the French people were gathering their energies for one of these fearful upheavals in the last quarter ; and the English in America were growing up into strength to found liberal institutions modeled on those of the mother country. When the time came they stood up to assert and defend their liberties with quiet and resolute dignity—without wrath but also without fear.

Such was the progress of the eighteenth century. It laid the foundations for an admirable Republic in America and for a transformation of Europe no less remarkable in the nineteenth century. We may consider the Anglo-American as the leading representative of civilization. The isolation in a common comparative poverty, community of dangers, struggles against difficulties, and the disappearance of the more glaring social distinctions from ordinary life, tended to consolidate the colonies, to increase their sense of justice, to make them considerate and impartial in sympathy. If the Anglo-American was far from being complete in these virtues, they were yet comparatively strong in him. They did not give him the suave courtesy and politeness of the French, but his good will was hearty and real.

Yet, notwithstanding his desire to deal fairly with the Indians, according to his own rather stiff notions of fairness, he rarely lived on really pleasant terms with them long at a time, at least on any other base than that of fear. He made no attempt to reduce them to servitude like the Spanish, he did not often try to make tools of them like the French, and generally was willing to give them what he considered an equivalent for the lands he occupied, though often driving a very hard bargain with the thoughtless and unbusiness-like natives, who, when they realized all the results, were apt to repudiate it as great injustice.

With such a revolt of the Indian he had little sympathy, holding that a bargain once made was irrevocable, and punishing Indian disregard of such arrangements with stern severity. He could not enter into the feelings of the Indian like the Frenchman, and humor his weaknesses or his ignorance, and the Indian quite failed to appreciate civilized virtues. His quiet, unceasing industry and the steady, resistless spread of his settlements, were full of menace and terror to the Indian. The wild hunter, to whom he had no essential ill will, but to whom a sudden change of habits was impossible, was obliged to retire before him. The favorite fields and forests, where his fathers had roved without restraint, were soon converted into farms and dotted with villages and towns. The Indian's eye was offended by the sight of a smiling plenty so agreeable to the civilized man, and his heart swelled with fear and rage when he saw the pioneers of this formidable emigration prospecting over his cherished hunting grounds in the Valley.

The English were neither roving in search of fabulous wealth nor seeking for allies ; they were building a future—too busy and too strong to court or fear the Indian. If he retaliated on the whites, by bloody massacres, the loss of his woods and prairies, he was punished with unrelenting severity and obliged to move farther away. The order, the freedom, the prosperity of the Anglo-American, was the doom of the wild hunter. He would none of it, he loathed and cursed it and fled before it, after having, by many a vengeful deed of blood, sought in vain to stay the tide of prosperous civilization. Thus the English exploration of the Valley was met by the most determined hostility and the progress of settlement could be maintained only by an approach to the extermination of the Indian tribes.

Even the haughty and bloody Spaniard drew out toward himself from the Indian heart a less deep and bitter resentment than did the English explorer and settler. The Indians were warriors themselves, accustomed to cruel and barbarous deeds, and could appreciate and admire the brilliant courage and prowess of the roving Spaniards, who seldom allowed victory to escape them. They also were accustomed to follow victory by slaughter and the slavery of the captives ; and, notwithstanding the more rational and more politic French style of making converts to the faith and gaining over the Indians to their interest, instead of crushing opposition by brute force, these gallant gentlemen and devoted priests could be ruthless and cruel to their enemies in a style quite appreciable to the Indian, for the old spirit of the crusades and the inquisition had not yet wholly died out in this vigorous Catholic race. Though turned into a new channel by the exquisitely skillful and subtle policy of the Jesuits and the still more humane spirit of other Catholic priests, it still remained to persecute and proscribe the Huguenot, and to add the intensity of hate to the animosity felt toward their political foes of New England and New York.

But the Englishman was a daring soldier only by necessity. He did not attract these children of nature by ruthless conquest nor by sympathetic condescension. Busy and reserved, he showed them little courtesy, which greatly wounded their pride and self-respect. He troubled himself little about them unless they intruded on him, when he was haughty and contemptuous; or when they committed injuries, which he punished with a severity that seemed to him just. The more the English settlements prospered, the higher the star of civilization rose, and the more industry, art, commercial and political liberty flourished, the less room was there for the wild and wasteful Indian hunter, the more helpless, dependent and degraded he became. He *would* not, as, indeed, he *could* not, accept civilization, and share in the hopes and prosperity which the New Age promised to the New World. The growing benevolence and pity of a people daily becoming more enlightened and just to their kind in general, could not be expressed to his comprehension, for the space required by an industrious population under the stimulus of an unexampled prosperity pushed him further and further from his ancient hunting grounds and the graves of his fathers, and his resentful retaliations made desolating punishments unavoidable. Thus the most enlightened and humane era of exploration—so far as the real character and purposes of the explorers were concerned—became the most wasting and ruinous to the Indian tribes of the Valley. To this statement there were, after a time, and far into our own century, some exceptions, but none during early periods.

English interest in the Great Valley commenced just before the close of the seventeenth century. As D'Iberville returned from his first exploration of the lower course of the Mississippi, in 1699, he found two English vessels near the mouth of the river. They had been sent by William III., king of England, to take possession of the Valley by fortifying the mouth of its principal stream. Finding themselves anticipated by the French, they withdrew. About 1690 the settlements of Virginia had extended their outposts to the foot of the Blue Ridge, and begun to pass over into the Shenandoah Valley, in the southern part of which are found the headwaters of various tributaries of the Ohio; and they soon became anxious to know what lay beyond. In 1710 Governor Spottswood, of Virginia, led a party across the watershed, and is said to have given their name to the Cumberland Mountains. Others refer the name to Dr. Thomas Walker, an explorer of 1747 or 1748. The Cherokees had been visited by an English trader in 1690, and in 1730 Adair, of South Carolina, visited them and some other tribes. In the same year John Salling, of the Shenandoah Valley, Virginia, was captured by the Cherokees, and carried to their country; was captured again, while out with one of their hunting parties, by the Illinois tribe, liberated by the French, at Kaskaskia, and returned home, by way of Canada, after an absence of six years.

The publications of the French explorers, the above mentioned and other occasional glimpses of English adventurers and traders, and the accounts of the Indians inflamed the desire of the Anglo-American public to penetrate to these, evidently the best, lands of the continent. But the circumstances were long unfavorable. The French home government began to take an interest in the Mississippi Valley, and the Canadian authorities took more and more pains to cultivate the friendship and alliance of the Indian tribes about the lakes and the headwaters of the Ohio. As the French soldiers, trappers and traders were agreeable companions as well as useful allies of these tribes, and did not threaten to dispossess them of their hunting grounds, the Indians believed they could be received with safety as they were with pleasure. But English settlements, whose thrifty and rapid growth threatened to deprive them of their lands, were dreaded by them as ominous of evil. The French took care to keep this jealousy alive, and even English traders were unwelcome to them. This, however, was partly and gradually overcome by the cheaper rate at which these traders supplied them with firearms and trinkets, which, being a monopoly in Canada and an unembarrassed trade among the English, could be furnished by the latter at a cheaper rate with the same profit. Gradually these traders worked their way across the border and among the tribes, here and there. They were the first real explorers of the Valley in the English interest, and, to some extent, raised up a counter influence against the French among the Indians, particularly in the south. The French had taken their measures in the northeast so wisely that the middle of the century appoached before traders ventured very far west of the Alleghanies.

The authorities of the central English colonies early began to take measures for acquiring Indian titles to territory in the Valley. In 1684 the Governments of New York and Virginia made a treaty with the Iroquois, at Albany, in which they procured a deed of sale of the Ohio Valley, which these warriors rather vaingloriously claimed as theirs by right of conquest. That title was sought to be strengthened by another treaty made with them, at Lancaster, Pennsylvania, in 1744. In pursuance of this idea, and in view of the conquest of all the French possessions in North America, soon to be undertaken, the English home government, in 1749, authorized the formation of a company, to which it assigned a large tract of land in the Valley. The gentlemen of Virginia saw in this plan of interior settlement personal gain and a great future for their commonwealth, and eagerly hastened the preliminary steps by holding councils with the Indians and commencing explorations.

Christopher Gist, the agent of this "Ohio Company," Col. Geo. Croghan, Indian agent for the English Government, George Washington, then rising into notice in the public service of the Colonial Government of Virginia, and a multitude of Indian traders studied the Upper Ohio Valley in the interest of future settlement. Virginia claimed this region by virtue of her original charter and warned off the French; but the Canadian authorities took immediate steps to protect their claims to it. The agents of the British Government, of Virginia and of the Ohio Company had taken pains to attach as many of the tribes near the Ohio to their interest as possible; but the French increased their forces, erected a line of forts from Lake Erie to Pittsburgh, captured a British trading post lately established on the Miami, and strengthened themselves in the central Valley.

In the last part of the year 1753, Gov. Dinwiddie sent a remonstrance to the commander of the French forces on the Ohio by the hands of George Washington. This effort, of course, proved a failure and was merely a formal preliminary to the active contest. Both parties now struggled to make the first point by getting firm hold of the peninsula at the junction of the streams forming the Ohio—now Pittsburgh. The French succeeded and held the place with so strong a force that Washington, who returned in the spring of 1754, at the head of 400 men, was too weak to drive them out, was attacked in his intrenchments, and obliged to capitulate. This was followed in the next year by an expedition under General Braddock, of the British army, which, for the frontier, was large and well appointed and strong enough to overwhelm the French. But Braddock, unacquainted with Indian warfare, and too obstinate to take counsel, was ambuscaded before he reached the fort and his army defeated with great slaughter—about 800 being killed and wounded. He was himself fatally wounded and died four days afterward. This memorable defeat occurred June 19, 1755. The French remained in undisturbed possession of the upper Valley for several years, while the two nations contended around Lakes Ontario and Champlain and in the valley of the St. Lawrence for the mastery of America. The English were at length successful and all the territory claimed by the French east of the Mississippi passed, by a general capitulation, into English hands.

CHAPTER V.

THE INDIAN'S DEFENSE OF HIS HUNTING GROUNDS AGAINST THE FRENCH AND ENGLISH.

The relations of the French and the Indians in the seventeenth century had been extended and maintained by the missionary zeal of the Jesuits. The arrogance of the noble officer as well as the rudeness of the common soldier had been toned down to general courtesy, partly by this influence, partly by the native politeness and pliancy of the race, and also by the pressing need of Indian allies. The English settlements south of them were politically their rivals and often their enemies by frequent wars between the two mother countries; and a bottomless gulf of religious difference separated them in sympathy. Antagonism in almost every direction seemed to make them mortal foes even in formal peace. Canada was always weak in numbers and poor in resources compared with the vigorous and prosperous colonies from England. The Canadian rulers, therefore, with much pains and skill, cultivated the friendship of the Indians. The Iroquois alone, long resisted their arts and their arms.

But circumstances were changed in the southern Valley when, at the commencement of the eighteenth century, the French took possession of the mouth of the Mississippi and built up considerable settlements as compared with those of Canada a hundred years before. Communication with France was more constant, a commercial spirit and political ambition had taken the place of missionary zeal, and the corruption and intrigue which were becoming so prevalent at the French court affected the morals of the colony. The officials ceased to feel dependent on Indian good will and sometimes treated them with contemptuous injustice. This was the more impolitic that the tribes on the east bank of the river were almost as fierce and warlike as the Iroquois, and English traders from the Atlantic coast passed among them, courted their good will and sought to weaken French influence over them, aiding them with advice and assistance when attacked. The English settlements were distant and they had not begun to fear them, while the French were near and in danger of becoming formidable.

There were French settlements among the Natchez on the bank of the river; that tribe grew jealous and discontented, and secretly concerted a rising with other tribes to expel them. This outbreak was hastened by the imprudent effrontery of the commander of the French post, who required the Natchez to remove their principal village because he wanted to occupy its site. The indignant tribe made all their arrangements in the most complete privacy, suddenly fell on the French, Nov. 29, 1729, and massacred two hundred in a day. The colony was strong enough to avenge it, which was accomplished with a severity and barbarity worthy of De Soto or of the Indians themselves. Hundreds were slain and their venerated chief Sun, with 400 of his followers, captured and sold in St. Domingo as slaves. The tribe was broken up and scattered among the neighboring Indian communities. A remnant that still held together in the wilds of Arkansas was no sooner discovered than it was attacked and massacred.

This was a very different policy from that which had secured the good will and aid of the tribes of Canada and the West in the previous century and the French suffered much from it. The Chickasaws never contracted a solid peace with them, and their hostility rendered the passage of the river, whose eastern bank above Natchez they held, unsafe. Though awed, perhaps, by the fate of the Natchez, they were strong in numbers and resolution and obtained arms, ammunition and other conveniences from the English traders. The settlement of Georgia, about this time, by Gen. Oglethorpe, made Savannah a more convenient depot of supplies than had before existed, and the unfortunate French policy, which alienated the tribes, rendered them more amenable to English influence.

The French undertook to chastise the Chickasaws and disperse the dangers which threatened the passage of the river from New Orleans to Illinois. After long preparation one expedition from New Orleans and another from Illinois marched against them. These expeditions failed to act in concert, the Illinois troops were disastrously routed, and the Chickasaws intrenched themselves against Bienville who led the force from below. Assisted by English traders, they resisted all Bienville's efforts and he retired discomfited, leaving the Indians triumphant and French prestige tarnished. Three years later, Bienville gathered a force of 1,200 French troops and 2,000 Indian allies and again advanced against the Chickasaws. These wily Indians now sued for peace which the French general, who made a long stop in the region of Memphis, and whose troops were much weakened by sickness in that unhealthy climate, gladly granted, and he withdrew with no effective security against further hostility. The Indians were still masters of the situation. In 1752, they formed an alliance, by treaty, with the English, who were preparing for the reduction of Canada. De Vaudreuil, then the French governor of Louisiana, undertook to chastise them by the destruction of their towns, but failed in the attempt and was obliged to retreat.

The English repeated in the Gulf States the policy of the French in Canada and Illinois—sought the alliance of the Indians and treated them with consideration. As they did not yet undertake to make settlements very far from the Atlantic coast, and were known chiefly by their flattering speeches and the advantages their trade conferred on the tribes, they were as successful as had been the French in the North. French and English policies were here reversed.

English traders often established themselves among them, took Indian wives and adopted their manner of life. The son of a Scotch trader by an Indian wife became, in after years, an educated, able and powerful chief among the Creeks. The influence thus acquired by friendly intercourse and conformity to Indian habits was exerted against the French, though not in open warfare except in the case of the Chickasaws, and French and English agents and traders competed near the Gulf for the favor and peltry of the red man. The cheapness of English goods, which were subject to the embarrassment of no monopoly, and the vigor with which the Englishman was accustomed to perform every task he undertook, gave him the advantage over the French, who never acquired much influence in the eastern part of the lower Valley, and were not strong enough to make a diversion in favor of Canada when the English Government seriously undertook to conquer it.

Yet, in Illinois and about the Great Lakes, the tribes were strongly attached to the French. Though less courted and flattered than formerly, and more attracted to the English by better terms of trade, they were shrewd enough to see that it would be a great advantage to them, as the Iroquois had discovered, a hundred and thirty years before, to have two nations of Europeans among them who were rivals for their favor. They knew something of the strong development of the central English colonies, and dreaded to have the French withdraw, beginning already to feel a dim presentiment of their fate. The more sagacious of the red race were deeply afflicted when, in 1763, the treaty of peace, which followed the capitulation of the French in Canada, ceded the whole of the eastern Valley, including the regions of the lakes and the posts on the Ohio, to the English.

Pontiac, a chief of the Ottawas, had his home in the neighborhood of Detroit. When that post was delivered up to the English he was about fifty years old—in the full maturity of powers which showed that individual talent is of no race or condition. His own and other tribes from near the lakes had given ready assistance to the French, and chiefly contributed to Braddock's defeat. Regretfully he had seen that victory neutralized when, November 24, 1758, an English army, better led, in which George Washington had an important command, approached Fort Duquesne, which his people had defended, and which the now feeble garrison, insufficient in numbers to hold, set on fire and abandoned. One by one the posts on the Ohio had fallen into English hands.

Immediately after this the theft of some horses, by Cherokee warriors returning from the English army, which they had accompanied as allies to the attack of Fort Duquesne, was severely retaliated by the settlers who had suffered the loss, who killed fourteen of the lawless Cherokees. The nation, infuriated by this bloody deed, and glad of an excuse for attack on intruders into their neighborhood, immediately commenced a desolating war on the scattered settlers who had lately built their cabins under the eastern shadow of the mountains. Fort Loudon had been built, about 1756, in the Cherokee country. The people settled near it, or straggling from it, were butchered, and the Fort beseiged. A force sent to the relief of the garrison was so roughly treated in the battle of the Etchowee, on the headwaters of the Little Tennessee, that it retreated, leaving the Fort to its fate. The famished garrison capitulated, but were attacked after leaving the Fort to return to the colonies, and many of them killed while the rest were held captive. In the next year Col. Grant, of the British army, led a strong force into the Cherokee country, defeated the Indians in an obstinate battle, laid waste their fields and destroyed their towns. This severe vengeance, the surveys that foreboded English settlement, and the fatal certainty with which settlements spread when commenced, filled Pontiac with alarm for his race.

He was a truly royal savage, endowed with all the qualities which secure influence to an Indian chief. His name was known and revered by every Wild Hunter from the Mississippi to New York, and from Hudson's Bay to Georgia. Pontiac first came into personal relations with the English on the delivery of Detroit to them by the French. He approached and studied them with the skill and penetration of a trained diplomatist, and at once saw the fundamental difference between them and the French, with whom he had been familiar. French aims were large and vague, did not threaten speedy dispossession of the Indian, and French courtesy easily avoided a too offensive expression of disgust at habits displeasing to the civilized man. The French peasantry, to whom few sources of gain were open, quietly cultivated a little patch of soil, showed little enterprise or ambition in those days, took life easily and were cordially friendly with the Indians, with whom they often hunted, trapped and fought.

The Anglo-American was a man of business, founding a home and a future for himself, and not unmindful of the future of his race—indeed, beginning seriously to think and act for the welfare of his adopted country. Order, industry and security were inseparable from the thought of the average Anglo-Saxon. He represented the energetic, thoughtful, personal thrift that was soon to become the characteristic of a new and higher form of civilization. Indian virtues and Indian vices were expressed in a form highly repellant to him. The Teutonic races are distinguished for energy and directness. They wanted, in America, the smooth and conciliating exterior of the French, and did not very much restrain their disgust at Indian vanity, brutality, and the want of self-respect that permitted drunkenness and beggary without shame. But the Indian had a rude sense of self-respect and of justice, which the English did not comprehend or regard.

If the Englishman and the Anglo-American stood at the head of a deeper, broader, and more important phase of civilization in the eighteenth century than the Frenchman of the seventeenth, it was still in the rough, and would take long to reach its highest expression, as sketched in the opening of the "Declaration" of 1776, which is still only partially put in practice. The Indian was elbowed aside, and his weaknesses and vices treated with unconcealed contempt. His violation of treaties which he had not understood, the injustice of which he too late comprehended, was visited with severe punishment by the sword, and still severer punishment in ejectment from his hunting grounds. The Indian constantly felt himself humiliated and swindled, and the inhabitants of the border who were in contact with him, and liable to receive the full bloody consequences of his resentment, could feel no sympathy for his character and habits, and considered the severest treatment of him only just.

Pontiac completely represented his race in their sympathies and antipathies; his great, though untaught, intelligence enabled him to see all the danger to the Indian of an advance of the English westward, while his experience was too limited to see how hopeless would be the attempt at resistance. He determined to organize the tribes, expel or destroy the hated invaders, and defend the West from them. His influence was all powerful with most of the tribes, and he arranged the details of a rising and plans for the simultaneous capture of all the forts. On the 7th of May, 1763, he attempted, in person, to surprise the post at Detroit. His plan was betrayed and Major Gladwin, the commander, was prepared to meet it. All the other posts were attacked, some eight or ten falling into the hands of the Indians, in most cases with circumstances of sickening barbarity. Having failed to surprise Detroit, Pontiac laid siege to it. Contrary to all the habits of the Indians, it was beleagured seven months—from early May until November. Fort Pitt was attacked, and a bloody battle fought with a force marching to its relief.

Detroit and Fort Pitt, however, both held out. The resources, discipline and skill of the white man triumphed over the sudden rush and unexpected persistence of the tribes. The Senecas, of New York, one of the "nations" of the Iroquois confederacy, joined their efforts to those of Pontiac, and hundreds of English traders and scattered settlers of the frontier, even east of the mountains, were butchered. Terror and confusion reigned along the whole border; for even the Creeks of Georgia laid aside the "Peace Pipe" and entered on the work of slaughter.

Consternation prevailed in the councils of the colonies, especially from Pennsylvania southward. If the rising under Pontiac should be successful, a cordon of fire would be drawn around the settlements, from the St. Lawrence to Georgia, for not an Indian heart beat on the continent that was not, at bottom, hostile to the English and alarmed at the display of strength which had expelled the French, whom the most of them loved so well. Two expeditions were prepared. One, under Col. Bradstreet, passed by way of Oswego and Niagara to Detroit; the other, under Col. Bouquet, pressed through from Eastern Pennsylvania to Fort Pitt and penetrated to the heart of the Indian country in Ohio.

But before the spring had fairly opened it became apparent to Pontiac that the task he had undertaken was beyond his power. The Indians were too scattered and possessed too few resources of support to act together in large numbers, for any considerable length of time. They had been able to maintain the siege of Detroit by the supplies pressed from the French inhabitants settled about it, and the wide range of forest, lake and river in its vicinity. But that was an exceptional case, they had failed there, trade was stopped, and they had long been accustomed to rely on the whites for arms, powder and ball for their own hunts and wars. They were, to crown all, incapable of a compact continuous union, even under a Pontiac. They were discouraged by the failure to get possession at once of the critical points, Detroit and Fort Pitt. The first heat of hope and passion was past; they could not now spare the whites, nor conquer them. Pontiac could no longer inspire them with the fire and fervor of the last year. They were ready on the first favorable occasion to treat for peace—with rage and despair, indeed, but they must have supplies; they must welcome the English traders; they must make a present submission or they would be crushed by the powerful armies of the whites and the miserable remnants of their tribes would be driven from their lands. Therefore no resistance was offered to the expeditions of this year (1764). Treaties were made by the two commanders and by Sir William Johnson with the more northern and eastern tribes, the captives were given up, military posts re-established, and trade revived.

Pontiac's only hope was now in the tribes of the West and in the French, who still held possession of the west bank of the Mississippi. During the next year, 1765, he exerted all his influence to get aid from them and to combine the prairie tribes, but in vain. The French were just turning over their forts and settlements to the Spaniards. Finding his cause hopeless the great chieftain accepted the inevitable fate of his race, went in person, in 1766, to Oswego, where envoys of all the tribes met Sir William Johnson, and concluded a treaty of peace. In 1769 he was murdered at Cahokia by an Illinois Indian, who, it is said, was hired to do the foul deed by an English trader. The whole nation of the Illinois was held responsible for it by the other Western tribes and were, soon after, almost exterminated by them, only a miserable remnant being left.

CHAPTER VI.

THE INDIANS MAKE WAR ON THE AMERICAN PIONEERS.

The southern Valley was divided with considerable definiteness between the tribes resident there. The Chickasaws and Choctaws held the east bank of the River, the Creeks, or Muskogees, southern Georgia and Alabama, and the Cherokees the upper Tennessee and the mountainous region southeast of it. If changes had taken place in modern days it had been an unknown length of time before. They had a recognized title to their lands. Kentucky, "the dark and bloody ground," in the thought of the Indian, was a Debatable Land, a common hunting ground, to which all loved to lay claim, and in which none had the hardihood to take up their residence and build their towns. They would have been the common prey of the warlike tribes north and south and could not hope to escape speedy annihilation. The Iroquois confederacy claimed a title to it because their war parties had sometimes safely crossed it in stealthy expeditions against the southern tribes and returned victorious to chant their own prowess at Onondaga Castle.

The Cherokees claimed it, for they had often beaten their enemies under its pleasant woods, or marched to the Ohio and surprised them at the "Licks," or salt springs. With equal right could the tribes north of the Ohio claim it, for none more often hunted in it or more frequently achieved the joy of the Indian's heart—a stealthy swoop across the river on a party of their foes and a rapid retreat to the safety of their own towns far in the interior, triumphantly displaying gory scalp locks on their spears, or at their belts. But these northern tribes had only the claim of present occupation to the lands where they built their towns. The Shawnees had withdrawn there from the south to escape the vengeance of the Chickasaws and Cherokees ; the Delawares were fugitives from regions far to the east; and others were modern comers from the west or north, who dwelt in safety because the Iroquois had lately been too busy fighting the French and negotiating with the English to find time to destroy them or drive them away. Even the distant Illinois trembled between the tribes of the Dakotah on the west and the Iroquois nations in the east.

The haughty confederacy of central New York assumed to own the third part of a continent through the terror of their arms and their bloody deeds, and lorded it over many tribes; but they never actually occupied the Valley proper. Their claim was several times secured by treaty, and the English Indian agents and colonial authorities bought up various rights from occupants or claimants, for comparatively trifling sums, given as presents to the chiefs, who were assumed to have the power of sale and transfer. The chiefs, however, had no more control over tribal lands than any other member of their communities, except as they might have more *influence* over their sturdily republican subjects. If the tribe refused to ratify the engagements they had made the transaction was null and void, according to Indian usage. Thus, treaties and purchases of territory were often illusory; not understood by the tribes as a final alienation of their lands, or, if consented to by these unpractical, grown-up children, the arrangement was repudiated when they had changed their minds. In 1768 Sir William Johnson, as commissioner for the British Government, bought, for fifty-two thousand dollars and some presents to the chiefs, a large territory south of the Ohio River and on its branches, in Pennsylvania and New York, from the Iroquois, the Delawares, Shawnees, Mingoes and others who had real or pretended claims. This did not prevent Indian outbreaks, Indian hunting on the ceded grounds, and constant hostility toward the inflowing explorers and settlers.

The Indians had very indefinite notions of such transactions, and only respected them so long as the impossibility of doing without traders and the conveniences of civilized life, which had replaced their primitive manufactures, was severely felt, and the fear of punishment was strong on them. Their bands of warriors had always been in the habit of roving at will; the individuals of the tribes did not easily conceive a binding force in their consent to a sale of lands such that they could not still roam over them and surprise any party interfering with their hunt, and often they had given no such consent. Their chiefs had pretended to bind them, but they recognized no such power in the chief. The forms of purchase satisfied the sense of justice of the whites, no matter how sharp the bargain or how small the consideration; but the Indian was unable to see it in the same light, or to feel the continuous and unalterable nature of the agreement. To this he could be brought only when he became civilized, drew his support from the cultivated products of the earth, and looked from the point of view of the thrifty husbandman rather than that of the roving hunter. The antagonism of interests and desires was almost complete. The French got over it in the readiest way by making themselves acceptable to the red man. Anglo-American industry, and the vigorous spread of, and requirements of space for, settlements, as well as the less flexible character of that people, rendered the same degree of success impossible to them when attempted, as it sometimes was.

A government policy was followed, by both home and colonial authorities, aiming to restrain imposition and irregularities by individuals and companies in their dealings with the natives. Private contracts and purchases, whereby lands were alienated from the Indians, were forbidden. Titles could be valid only on tracts purchased by government, and settlements outside these were declared unlawful. Such laws were not always regarded, and their violation was a fruitful source of Indian war. Before and immediately after the French war, the British Government favored the eager desire of the colonists to secure lands and commence settlements west of the mountains; but the discontent of the tribes, as shown in Pontiac's war, the commencing troubles between the colonies on the Atlantic and the Home Government, and other circumstances connected with the government of Canada, now in their hands, induced a change. The authorities of the colonies were forbidden to grant lands or authorize settlement beyond the headwaters of the streams falling into the Atlantic. Pontiac's principle was to be, in substance, adopted and the tribes were to be left in undisturbed possession of the eastern Valley. The French policy of conciliation and gentleness was more fully adopted.

When war with the colonies actually broke out, the British Government, determined to subdue the colonies at any cost, sought the alliance and aid of the tribes north and south, furnished them with warlike stores and organized their expeditions against the settlements of the border. Had Pontiac been alive he would have seen his desire realized, and it would have gone hard with the settlers of Western Pennsylvania. Virginia, Kentucky and Tennessee, for the irresistible tide had began to flow in spite of the commands of the British Government. Pontiac's war had made the people of the border still more familiar with the inviting features of the agricultural Valley; discontent with the colonial policy of England begot many troubles along the coast, and the rough mountain regions were not attractive after a glimpse of the charming and fruitful territory beyond.

In 1753 an American settlement of eleven families was made on the Youghiogheny, on the Valley side of the watershed of the Alleghanies, while yet the French held possession of the great rivers. After the occupation of Pittsburgh settlement began north and south on the more eastern branches of the Ohio. Pontiac's war mostly extinguished these in blood, but, a general pacification having quelled Indian animosity for the time, they were re-occupied by the courageous frontiersmen, and the oncoming tide of a most fruitful civilization was announced by the gradual filtering through the mountains, from above Pittsburgh to the upper Tennessee, of some hundreds of families. Among these there could not fail to be some both rash and abandoned characters, whose careless or criminal violence would furnish the spark required to cause the smouldering wrath of the Indian to burst into flame. A misdeed of the Indians below Pittsburgh was retaliated by a party of whites with blind fury, and among the innocent victims was the entire family of Logan, a Mingo chief, friendly to the whites. A violent war broke out at once. An army sent by the Governor of Virginia, Lord Dunmore, to subdue the Indians fought a battle with them at the mouth of the Great Kenhawa, October 10, 1774. The Indians fought with obstinate resolution, and the battle lasted the whole day—seventy-five whites being killed and one hundred and forty wounded. Logan fully glutted his vengeance for the slaughter of his family. The Indians were at length beaten and retreated over the Ohio.

The wise and eloquent Logan sued for peace for his people in a memorable speech, preserved by Jefferson, which gives fine expression to one side of the Indian character. But far more trying than bloody battles to the settlers were the sudden attacks of small bands of enraged Indians on explorers and families, in which women and children were pitilessly slaughtered. Nothing would appear better calculated to intimidate and restrain the wave of settlement, and yet it seemed to arouse hardihood and courage instead of awakening fear. Although a formal peace was made many times, the conflict was really continuous from 1774 to 1795; and yet, during this period, the numbers of the settlers were increased by more than 150,000 in Tennessee, Kentucky, Ohio, and the parts of Pennsylvania and Virginia adjacent. The possibility of having to endure the most dreadful forms of suffering and death seemed to have no power to terrify these courageous men and intrepid women. No signs of quailing or retreating were shown. They floated down the river in flat boats with wives, children and all the property they possessed, liable at every turn to be ambushed and fired on from the shore. Individuals wandered, often alone, through the forests, hunting, exploring, or passing from settlement to settlement. They gathered—a few families at most—within a stockade fort liable to be at any moment attacked. More courage and resolution could not well be displayed.

The contest was very obstinate and very bloody during the Revolutionary War. The British, from the posts at Detroit, near Lake Erie and in the "Illinois Country," distributed the "sinews of war" to the tribes. British agents stirred up their animosity, organized, and sometimes led, expeditions against the feeble settlements south of the river; and in the south stimulated the Creeks and Cherokees to slaughter. The Indians were only too ready. In 1776, the settlers of Tennessee fought two desperate but successful battles with the Cherokees which kept them quiet for a time. The Ohio tribes hovered around the settlements in Kentucky until they could safely strike a quick, sure blow, or capture a straggler, then swiftly fled across the river. Sometimes they laid siege to the block-houses and forts; sometimes bloody battles were fought. The Indians found a people "worthy of their steel" and even more resolute, fearless and capable than themselves. But hundreds were cut off, many promising homes were laid waste, the women and children barbarously murdered. The wild hunter fought well for his race and his hunting grounds against the intruding civilization he abhorred

But he did not always find himself safe on the north side of the river though his towns were some days' journey in the interior. Frequent expeditions of the settlers penetrated to them and inflicted severe retaliation. Nor were the posts of the British, though distant hundreds of miles from the settlements, secure from attack. After considerable persistence, Gen. (then Col.) George Rogers Clarke, a truly representative pioneer of Kentucky, obtained authority from Patrick Henry, Governor of Virginia, to organize an expedition against the British posts in "the Illinois." He collected a small troop at Pittsburgh and gathered the rest from the new and constantly threatened settlements in Kentucky. Notwithstanding the serious danger to their homes, they answered the call. Clarke made a forced march through the forests, captured all the posts by surprise or artifice, deprived the British of their prestige and stores for the Indians, and secured the rear of the settlements in that direction. Thus no small share of work was done by these pioneers in aiding to secure American Independence.

But the Ohio and Indiana tribes were determined to hold their lands, and still maintained the contest with great pertinacity. When the war closed, the British still remained many years at Detroit and gave them more or less encouragement. The settlers suffered some bloody defeats, and the more they increased the more determined became the Indian attack. From 1782 to 1789 it was computed that 2,000 horses were stolen by the Indians, 1,500 persons killed or captured and $60,000 worth of property destroyed.

Their attempt to uproot the settlements south of the Ohio had proved vain, but they were the more resolute to hold the country on the north. Until 1788 Ohio was not opened to settlement; and the impossibility of obtaining titles to lands, the hostility of the Indians and the proclamation of the Government forbidding settlers to enter, (which was sternly enforced by the Indians), until treaties and surveys were completed, confined the whites to the regions south of the river. During that year many thousands entered the region which had been so populous during the time of the Mound Builders. But this occupation was based chiefly on the assumption that the treaty of peace with England had conveyed a permanent right over the soil to the Government of the United States. The Indians refused to recognize any such right, and demanded that the whole country north of the Ohio should be vacated and left to them. Rights resting on conquest have ever been considered among nations as valid. The Indians had joined England in the war and both had been successfully resisted; therefore their territory was held to belong to the conqueror. To make treaties that should quiet the Indians and maintain this point was the effort of the new Government. This effort failed, although various treaties were made with one or more tribes. They were constantly disregarded, after a little time, and more or less desultory war carried on against the settlements north and south of the river.

Finding that negotiation made no real headway, although a formidable outbreak was delayed by the tribes, General Harmar was sent against the Miamis in 1790. Although he laid waste their fields and burned some of their towns, his battles were not entirely successful and he retired, leaving a sense of victory in the minds of the Indians. In the following year, General St. Clair led an army of 1,400 men against them and met a defeat as decisive as Braddock's, thirty-six years before. More than 800 were slain and the rest fled in dismay from the field.

Preparations were commenced at once to send an adequate force to retrieve these disasters and protect the settlements, while persevering efforts to effect a treaty with the combined tribes without further bloodshed were undertaken. The Indians would not listen, insisted on the evacuation of their lands, continued to attack outlying and vulnerable points and labored to form a strong confederation like that under Pontiac. General Anthony Wayne occupied the years 1792 and 1793 in organizing and training an army equal to the emergency, and, August 20, 1794, fought a decisive battle with them on the Maumee River. This virtually put an end to the war and secured a solid peace, which was signed August 3, 1795, by all the western tribes. The Wild Hunter had failed in his defense; in the trial of strength he had proved the weaker; and the English who had encouraged him failed to succor him in the hour of need. He now comprehended his destiny and bowed before it. Goods were distributed among the tribes to the value of $20,000, and about $10,000 worth were to be delivered to them annually thereafter. The State of Ohio was mostly ceded, absolutely, to the whites, and the territory west to the Mississippi and north to the upper lakes secured to the Indians, with the reserve of various locations for forts.

The white man permitted the Indian to roam over his own hunting grounds in bitterness of heart, anticipating the speedy approach of the time when he must "move on," because they would be wanted by the civilized race. In his feeling it was a bitter lot, but humanity has been immensely enriched by his dispossession. By this time the Cherokees were so outnumbered by dense settlements immediately on their borders that they renounced a hopeless contest. The Ohio tribes had frequently the satisfaction of defeating their foes, and acquired a vast amount of property for those times; but the Cherokees had been constantly defeated since 1758, when they destroyed Fort Loudon, and there was no encouragement to continue hostilities.

Tennessee, Kentucky and Ohio became states in the Union, Indiana became a territory, and, after a time, Illinois. The Indians looked on with silent rage. It was past help and hope unless they had other forces than their own. They had valiantly contested every foot of ground in the West; but the more they slaughtered, captured and tortured at the stake, the more rapidly did this flood of civilization which they hated rise and threaten to overwhelm them. "Like the grass of the prairie, like the leaves of the forest," said they to the whites in their picturesque language, "you spring up everywhere." The vigor of the new stock crowded out the native plant.

CHAPTER VII.

TECUMSEH AND HIS ALLIES.

The Indian had reason to wonder, for in the year 1795—the year in which they were obliged to consent to the alienation of all the lands the whites wanted north of the Ohio—twenty thousand emigrants passed down the river to seek permanent homes on what the tribes considered their own lands; and by the close of the century many more people had emigrated to the Valley than there were individuals in all the wild tribes of North America. Simple astonishment and a sense of helplessness kept them quiet; a peace of fifteen years permitted the more accessible parts of the southern and eastern Valley to fill up with a population almost as large as all the colonies contained when they declared their independence, and this population had laid broad, deep and most satisfactory foundations for a great future.

New England, Pennsylvania, Virginia and North Carolina came, so to speak, bodily to the West. They formed, here and there, large communities and considerable towns, for the time fairly homogeneous, and bearing all the characteristics of the people of the states from which they had emigrated. They soon commenced a new development, but, for the present, it was simply the East set down in the West, with all its institutions, its thrift and the intelligence and ambition which the shock of the War of Independence had awakened in a race rich in undeveloped capacities. This fifteen years was the utter doom of the red man's future as a hunter in the Valley, but he was unable to see its full import. So large an idea there was no room in his mind to receive.

Tecumseh was born to rule his people, and, like Philip of Mount Hope and Pontiac, he had the breadth, the power and the enthusiasm of a genius. But no genius can afford to dispense with a broad and true education, which gives clearness and exactness to thought and distinguishes between the visions of the imagination and the severe realities of life. Tecumseh had been often in communication with the whites in his early life; but he was a genuine Indian. Civilized life did not attract him; there was nothing he found desirable in the prosperous comfort of the settlements, for it was to be obtained only as the reward of a labor and drudgery that were abhorrent to the soul of the free Child of the Woods. He was ambitious and found no opening for his aspirations among the whites. He fancied that the weakness of the Indian was caused by his accepting the aids of civilization; that if he returned to primitive habits, excluded the white trader and his demoralizing wares, primitive virtues would return, and that his race would be able to resist the progress of the whites.

Associating his brother, the Prophet, who was a famous Indian "Medicine," with himself, he appealed to the superstitions of his race, urged, by eloquent speeches and example, a return to ancient simplicity and self-dependence and labored, like King Philip and Pontiac, to unite all the tribes, north and south, in a general confederacy against the settlers. He resolved that no more lands should be sold to the whites, and secretly visited the tribes, using all his own eloquence and the arts of his brother to organize a strong confederacy in the upper Valley, from 1806 to 1811. Great Britain had not yet lost all hope of recovering her former colonies, and still courted the good will of the Indian tribes around the Great Lakes, as well as of the French inhabitants of Canada. Tecumseh was in communication with them and was aware of the approaching war, and he prepared to strike a terrible blow when it should break out.

He was of the Shawnee tribe, who have been called the Arabs of the Wilderness. They were originally from the

South, from which they had been driven by the combined enmity of the Chickasaws and the Cherokees. Tecumseh visited the southern tribes, just before the outbreak of the war, and urged his views with all the force and fire of Indian oratory. The Chickasaws declined to enter into his plans, but the Creeks lent a more willing ear. The renown of the Shawnees, who were among the most warlike tribes in the Valley, and had been prominent in all the old wars against the whites, was known to them. With some difficulty he persuaded the Creeks to unite with him. For nearly eighty years they had been in relations, for the most part of friendly trade, with the English, and some of their chiefs resisted the proposal and refused to take part in it. Tecumseh assured them that when he returned North he would "stamp his foot and the whole continent would tremble." He visited all the tribes as far as Florida and prepared such a vengeance against the whites in the South as had, nearly three hundred years before, come so near being the utter destruction of De Soto at Maubila.

Tecumseh felt England behind him and knew that the war between Great Britain and the American Republic was about to be declared. When that conflict should commence he would "stamp his foot" metaphorically, and his southern allies would attribute the outbreak to his mystical power. He had already confronted Gen. Wm. H. Harrison, Governor of Indiana Territory, in a council held August, 1810, and refused assent to a treaty, on which the Governor insisted, for the sale of more land required for settlement, and believed himself strong enough to defy the power of the whites. He was, however, sufficiently politic to defer the commencement of open war until all should be ready to strike a decisive blow that should "shake the continent." His brother was not as prudent, and precipitated the war before his return from the South, and before a sufficiently large force had been collected to make sure of victory. Governor Harrison, comprehending the danger, had obtained some government troops and called out the militia of the territory in order to strike a decisive blow in season. To the great indignation of Tecumseh, his brother attacked this force instead of temporizing and waiting till success could reasonably be expected.

This was the battle of Tippecanoe, and was fought November 7, 1811, seven months before the declaration of war against England by the United States Government. The Prophet was beaten, his forces scattered, his own prestige, and that of Tecumseh, with the confederacy they had been at so much pains to organize, were lost. The grand blow that was to have been so fatal was turned aside and resolved into an ordinary series of attacks on weak outposts, scattered settlers and small bands of whites. Tecumseh, still hoping to retrieve the mistake through the success of the British forces when the war should begin, retired to Canada, collected his Indian allies in that region, and waited.

War was declared June 19, 1812, and hostilities soon commenced in the neighborhood of Detroit. July 17, a British and Indian force captured Mackinaw; General Hull, after commencing an invasion of Upper Canada, retreated, without good reason, to Detroit; and a party he sent out to meet reinforcements was ambushed by Tecumseh and cut to pieces. Tecumseh joined the British commander in a demonstration against Detroit, which so intimidated General Hull that he surrendered that place and all the forces under his command, without resistance, August 16, 1812. The Indians further west watched their chances, one of which occurred at Chicago August 15. The garrison had been ordered by General Hull to evacuate Fort Dearborn, located at the mouth of Chicago River. After having marched out they were attacked by the Indians. The party attacked contained about eighty soldiers, a trader with his employes, and a number of women and children. Between fifty and sixty, including two women and twelve children, were massacred, and the remainder made prisoners. But no really important successes in the West enabled the Indian tribes of Indiana and Illinois to overcome the depressing effect of the battle of Tippecanoe. A vigorous patrol was kept up on the frontier by the settlers. Many lives were lost but no large Indian force was gathered, and the whites gradually drove the hostile tribes north and west beyond the boundaries of settlement.

But Tecumseh had staked all on the success of the British. With two thousand or more warriors he gave them all the assistance possible, and in many reverses which befell the American forces horrible massacres were perpetrated by the tribes he commanded. January 22, 1813, at Frenchtown, on the River Raisin, an American force numbering 800 was defeated, and, after the surrender to the British, all the survivors but thirty-three were massacred by the Indians. Another disaster at Fort Meigs, May 5 following, resulted in the death or captivity of 650 Americans. But the day of hope for Tecumseh was drawing to a close. September 10, 1813, Commodore Perry obtained command of Lake Erie by a decisive naval victory over the British. This was followed by the invasion of Upper Canada by General Harrison and the battle of the Thames, October 5, in which a complete victory was gained over the united British and Indians, and Tecumseh was killed. He had been exceedingly formidable by his resolute valor and the barbarity of his Indian allies. In his fall all danger of Indian confederations in the upper Valley passed away. In him the hope of the prairie and lake tribes became extinct, and the danger to the settlements was over.

In 1812 another event, which became the signal and the instrument of a new and greater era of progress in the development of the Valley, occurred—the first steamboat on western waters awakened the echoes of the woods from Pittsburgh to New Orleans. The Age of Steam had begun.

In the South the war cry of Tecumseh, in 1812, found no echo among the Choctaws, the Chickasaws or the Cherokees.

A portion of the Creeks also refused to listen; but some thousands of them seized the tomahawk and sprung upon the war path in answer, and proved themselves the bravest and most uncompromising of their race.

For a hundred years they had been multiplying their relations with the French and Spanish, on the South and West, and the English on the East; and, since the close of the Revolutionary War in 1783, emigration had pressed on them from all sides. They had come into closer contact with civilization than the tribes of the North. Some of their most eminent chiefs were educated half-breeds; trade was briskly driven by multitudes of intelligent men, as well as adventurers, and the capacity of the Indian to become considerably civilized, in time, and under favorable conditions, became evident. There were two parties among them. One clung to the whites; the other sighed for the wild freedom of ancient days and longed for the excitement of war. These had kept up occasional hostilities with the intruding settlers from the first, and tried to resist the progress of civilization among their people. This party sprung to arms at the call of Tecumseh; the other joined the whites, who were also supported, more or less, by bands of Choctaws, Chickasaws and Cherokees.

In the heart of their country, about a hundred miles north of Mobile, were considerable settlements. Here fell the most fearful blows. The war spirit had reached its height; many isolated murders had occurred, and the inhabitants collected into forts.

In a battle fought between the whites and Indians on the 27th July, 1813, at Burnt Corn, the whites were defeated. The country was insufficiently provided with means of defense. Over 550 persons were collected in Fort Mims, a few miles from the ancient Maubila, where the Indians of that time fought so terrible a battle with De Soto, nearly three hundred years before. On the 30th of August this place was attacked by one thousand Creek warriors. The garrison was unprepared and one of the gates was open.

The Indians rushed in before it could be closed and the fearful work of slaughter began. It continued for five hours, for the doomed settlers fought with the bravery of despair. Fourteen persons escaped, a few negroes and half-breeds were kept as slaves. All the rest perished. The slaughter and cruelties of De Soto were avenged on a nobler race, on women and children.

The whole surrounding country was roused. From Georgia, from Mobile, from the Choctaws and Chickasaws, and from Tennessee the cruel Creeks were assailed. Gen. Jackson, afterward the hero of New Orleans, hastened with a large force from Nashville, and sent Gen. Coffee to attack Tallasehatchie, where a party of the Creek warriors had assembled. More than 200 were slain, not one asking or accepting quarter. They fought till the last was killed. This was November 3, 1813. On the 9th November they were again defeated with great slaughter at Talladega; Gen. Cocke defeated them November 18; and Gen. Floyd, commanding an expedition from Georgia, routed them, inflicting on them a loss of 200 warriors, November 29. Gen. Claiborne inflicted another defeat on them, at Holy Ground, December 23.

Notwithstanding all these reverses there was no sign of quailing among these fierce and heroic warriors. General Jackson desired to spare a race so brave ; but they preferred death to surrender as long as they could keep the field. Twice they attacked Jackson's force and were beaten off with difficulty—January 21 and 24, 1814. The Indians considered these to be victories, since, the battles over, the army retired to its intrenchments. It was too weak to pursue so valiant and determined a foe. It has been affirmed that, in these last two battles, the Indians were inferior to Jackson's army by several hundreds.

January 27, 1814, they attacked General Floyd, with his

Georgia troops, amounting to more than 1,600 men. Although beaten off, they had inflicted so much loss that Gen. Floyd judged it wisest to retire. March 27, Gen. Jackson attacked a chosen band of 1,000 warriors, who had fortified a peninsula on the Tallapoosa River, called the Horse Shoe, from its form. His force was double that of the Indians and furnished with cannon and cavalry. The Creeks defended themselves with a bravery never excelled, answered all offers of peace with bullets, and nearly all perished.

But a remnant was now left. Part of these made their submission from time to time, and a part fled to the Seminoles, within the jurisdiction of Spain, to renew the same desperate conflict many years later. August 10, Gen. Jackson concluded a treaty of peace with the Creeks, and the important Indian Wars of the Valley east of the Mississippi River were over. The wild hunter of the South—equally with the tribes of the North—had failed in his defense. He yielded only when he could do no more. Some of the irreconcilable Creeks fled to the swamps of Florida and joined the Seminoles. These, thus recruited, and strengthened by escaped negro slaves in later years, made a resolute stand and shed much blood before they could be vanquished in their almost inaccessible retreats. This was done at great cost, and all the tribes east of the river were finally removed to reservations west of that stream—mostly to the Indian Territory west of Arkansas. The red hunter had made a vain but gallant fight for the possession of the Great Valley.

The overflowing resources of the Valley may be made to support in abundant comfort perhaps two hundred millions of human beings. The Indian tribes who occupied it probably never numbered one hundred thousand souls east of the Mississippi; they made the least possible use of its capabilities, often suffering from want in the midst of the plenty it offered; and instead of using its resources, they found their chief business and delight in war—capturing, slaying and torturing each other. It is impossible to see any philanthropy in scrupulously leaving them to neglect and waste these immense sources of welfare to man because they were in temporary possession. If we admit that it was right to oblige them to permit others to develop the wealth they neglected, the Indian policy of the United States Government may be called worthy of a just and enlightened people. It may even be called chivalrous and considerate almost beyond example, and, in some points, unwisely so.

The French of the seventeenth century treated the tribes as allies because they had need of them. When the English Government acquired possession of the regions occupied, or claimed, by the French, it continued this practice for the same reason. The Republic did not require Indian allies, yet it continued to treat them as independent nationalities, over whom it assumed no rights of control but what treaties gave it. The actual character of the situation was not, however, in keeping with this nominal relationship. Equality is assumed by this policy, or, at least, the power on each side of fulfilling treaty stipulations. Could definite bounds to the progress of settlement have been maintained, or could the Indians have accepted civilization, have withdrawn themselves to a reasonable area, or have settled on so much land as they could cultivate, like the rest of the agricultural population, no difficulty would have presented itself.

This, for the tribes, was impossible from the rigid nature of the Indian and his immemorial habits ; and it was equally impossible to allow them sufficient territory to support them as hunters in the best parts of the Valley. The *assumed* relation, therefore, was not the *real* one. The Indians were the wards of the nation. They resisted the demand for their lands, but they must be had nevertheless ; and treaties, for the most part, have been merely the expression of Indian assent, most unwillingly given, to a demand which they were unable to resist. This demand was unavoidably made—

but with such mitigating circumstances as the case admitted. Goods and money were freely given to procure assent by temporary gratification, and the future support of the tribes was assumed, so far as they required aid, as a just return for the enforced abandonment of their lands.

It has been computed that the Government of the United States has paid, or engaged to pay, to the tribes of the whole country about two hundred millions of dollars for their lands. Much of this is invested and the interest paid them annually for their support.

They are treated as far as possible as independent communities. They govern themselves with entire freedom within the limits assigned them, and no force is applied to oblige them to change their traditional habits if they keep the peace and carry out the provisions of the treaties. This is both chivalrous and kind; but it has many unfortunate results. For the most part they have few of the qualities necessary to preserve them from degradation when deprived of the excitements and stimulus to self-preservation of their ancient life. Their few rude and barbarous virtues mostly disappear when in contact with, or dependent on, the whites. They readily receive some of the worst vices of civilization while its virtues are unattractive and incomprehensible to them. In this state of independent dependence, so to speak, they are removed from elevating influences while subjected to many that are demoralizing. It is quite impossible to keep abandoned whites wholly away from them; it is practically impossible to control government agencies among them so completely that its intentions shall be always fully carried out, and still more impossible to prevent the intrusion and occasional violent deeds of unscrupulous men on the borders of civilized society —or outside of them—that exasperate the tribes and excite them to fearful retaliation on the innocent. Above all, the independent condition leaves them under the control of their naturally fierce and bloody passions. The slavery to which the Spaniards subjected the Mexicans and Peruvians was, in some aspects, preferable to this liberty to remain in primitive barbarism—after having lost primitive virtues—and to add to it civilized vices.

The Indian Policy of France and Great Britain, in Canada, was different and seems, in some respects, more successful. They have been left there with less liberty, and more stringent regulations against evil white influence have been combined with more effort to overcome their distaste for civilized habits; but the numbers there have been few compared with those in the United States, and, for the most part, from various causes, they have been less fierce and intractable. The difficulties in the way of a satisfactory solution of the Indian Question have proved really insurmountable. The liberty allowed them has constantly been abused, and an Indian war has been of almost annual occurrence since settlement began to pass the Missouri River. The army required to subdue and police them has cost uncounted millions, and many thousand lives have been lost. The settlers subject to their attacks have very naturally been greatly exasperated at their bloody brutality and would wish them mercilessly exterminated, while those who consider the wrongs almost inevitably done them criticise the Indian Policy from the opposite point of view.

It is not easy to see how so intractable a race of several hundred thousand could have been more generously treated under all the circumstances, nor how the Indian Policy could have been so altered as to obviate the difficulties of the situation without doing extreme violence to the Indian nature. The means that were at hand to influence them have been employed; all possible liberty has been allowed them, and when their ferocity has broken forth in war they have been chastised only so far as was necessary to restore peace and induce them to keep it. The character of the race must have made any policy a failure which sought their well-being as civilized communities would understand it.

The filling up of the Pacific Slope, the vast Rocky Mountain region and the Western Plains with a civilized population, must make a change in this policy inevitable at no distant day. The idea of a real independence can not be maintained when liberty to remain savages would mean placing adjacent settlements at the mercy of their bloody barbarism. To constrain them to retire to reservations, to lead a quiet and peaceable life, and to learn the arts of civilization will be essential to the safety of the growing population of the Great West. This change will naturally be as quiet and gradual as possible; but, ultimately, their destiny is to accept civilization or to be punished into annihilation. This, the safety and welfare of far larger numbers and much more important interests than their own will absolutely demand.

Between 1830 and 1850 the southern tribes, and a part of the northern, were partly persuaded and partly forced to exchange their lands east of the Mississippi for a remarkably fine region—the Indian Territory—beyond the then borders of civilization. Their removal was accomplished at the cost of the United States, and annual funds for their support provided. The southern tribes had been so long and closely connected with the whites that they were able to adopt many of the habits of an agricultural population. The result has not, apparently, been a failure, and it indicates the probable future of the race. While a vast territory remained unoccupied they were interfered with very little; but the plains are already largely settled, and a civilized population is crowding into the fertile valleys and basins and opening mines in the various ranges of the Rocky Mountain plateau. As in the Valley formerly, the tribes of this region now resist encroachment by repeated bloody outbreaks. It is not believed that the whole number of Indians within the present area of the United States is less than the same area contained three hundred years ago. There will soon be no more room for the Wild Hunter, and stern necessity will require that he forget his distaste for labor and adopt the habits of the farmer. The inevitable fate of the tribes of the Dakota race and the Pacific Slope is to imitate the Cherokees, Choctaws and Creeks of the Indian Territory, and their descendants will ultimately become citizens of the Republic. On the whole, the Indian Policy of the country may be designated as just, forbearing and considerate.

CHAPTER VIII.

THE HEROIC PERIOD OF SETTLEMENT.

By the time that the sparks of Pontiac's War were completely extinguished a fair acquaintance with the upper part of the Ohio valley had been gained by various English, or Anglo-American explorers. Dr. Thomas Walker had penetrated to the heart of Kentucky in 1747 and again in 1758. The contest with the French and then the Indians, the negotiations of British and colonial agents, and the wanderings of English traders south of Lake Erie, had made Ohio and Western Pennsylvania familiar ground. In 1766, a party headed by Capt. James Smith visited the lower valleys of the Tennessee and Cumberland Rivers, tracing them to the Ohio. In the same year Findlay, Harrod and others wandered over other parts of Kentucky.

In June, 1769, Daniel Boone and others penetrated to Kentucky. There was danger from the Indians and some of the party were killed, but Boone remained hunting and studying Kentucky three years; much of the time alone. A skillful hunter, more than a match for the Indians in their own crafty ways, and delighted with this beautiful region—it was not a "dark and bloody ground" to him, but a Land of Promise.

On the 9th of March, 1769, a petition of the "Mississippi Company," signed by George Washington among others, was presented to the English Board of Trade asking for two and a half million acres of land in Ohio. It was not granted until Franklin's paper on "The Ohio Settlement" had interested the Government in the scheme. The king signed the grant, August 14, 1772. In 1769, Tennessee received its first permanent settlers. Previously to this, (from 1750 to 1760) settlers had crossed the boundaries of the Valley in southwest Virginia and western North Carolina. This was an extension of those settlements. At the same time settlers located on the Holston River.

1764 to 1769.—French and Spanish settlements already existed on the shores of the Gulf, in Alabama, and near the Great River in Mississippi. This region passed into the hands of the British Government in 1764, being called West Florida. A large part of the French inhabitants retired across the Mississippi. The English encouraged emigration there, and settlers from North Carolina, Virginia and Georgia located in the present State of Mississippi between these dates. French settlements had long before begun to creep up the Alabama River from Mobile, the residence of a garrison.

1770.—A settlement was formed at Wheeling, in this year.

Emigrants from New Jersey settled in Mississippi, followed soon after by others from England, Scotland, Ireland and the West Indies. Negro slavery was introduced from the first, by the French and British.

1771.—Pensacola, in this year, contained eighty houses and was the residence of the English Governor. The unhealthy climate along the Gulf coast rendered the increase of population slow on that side, while the fierceness of the Creeks retarded settlements on the higher lands of the interior; yet traders and travelers were constantly crossing their country in all directions.

1772.—Settlements in East Tennessee extended north and south from the Wautauga. We learn from Washington's diary of a journey made to Pittsburgh and the Kenhawa River below, where he had lands, that families were then (1770) crossing the mountains in Pennsylvania and Virginia. Farms had now begun to multiply in the neighborhood of Pittsburgh.

1773.—Kentucky and Tennessee were swarming with surveyors and explorers selecting sites for settlement. Louisville was surveyed and the plat of a town laid out (though no settlers had yet arrived) for John Campbell and John Conolly, in this year. Four hundred persons are also said to have passed down the Ohio and Mississippi to settle in the Natchez region. In this year, also, Daniel Boone started with his family and cattle from North Carolina to locate in Kentucky. Being attacked by the Indians on the way and six men slain (there were five other families, and several men besides, with him), he retired to the settlement on Clinch River and waited two years before establishing the first family in Kentucky, in the meanwhile exploring for other parties. Emigrants from Virginia and North Carolina are said to have passed down the Tennessee to Mississippi—an enterprise of astonishing hardihood and resolution.

1774.—Capt. James Harrod with forty others laid out Harrodsburg, and built a number of cabins, but did not yet bring their families.

1775.—A crop of corn was raised this year by Simon Kenton and Thomas Williams, at Maysville, Kentucky. Settlements were commenced at Boonesborough by Daniel Boone, and at Harrodsburg and block-houses built, and also at three other places, all in the heart of Kentucky and widely separated from each other. At the end of this year there were five hundred persons in all the settlements of Kentucky, most of them being vigorous men. Two hundred and fifty acres of corn were planted and gathered.

The "Transylvania Company" was formed in North Carolina. Richard Henderson was at its head. They made a private purchase of a large tract of land in Kentucky and another in Tennessee, of the Cherokee Indians, for 10,000 pounds sterling, and sought to organize a government. Virginia did not recognize the purchase in Kentucky, and the attempt to organize a government was limited to a preliminary convention. Virginia claimed them as part of her population, in the next year, and organized a county in Kentucky.

1776.—A few new settlements were made in Kentucky in this year, in Franklin and Washington Counties. July 7 three young ladies, one being a daughter of Boone, were captured by the Indians. The girls were amusing themselves in a canoe, on the Kentucky River, within sight of Boonesborough. They were recaptured, uninjured, the next day. A trip was made from Pittsburgh to New Orleans for powder. In the next year 136 kegs were successfully brought up to the former place. George Rogers Clarke settled in Kentucky this year. The Cherokee Indians prepared to destroy the Tennessee settlements. July 20 and 21 two battles were fought with them by the settlers, with complete success.

1777.—The Indian tribes became much exasperated by the growing settlements and constantly harassed them, hovering about in the woods to surprise individuals, or laying siege to the forts. This state of things continued for twenty years.

September 26, Fort Henry, near Wheeling, was approached by 400 hundred Indians. They were led by Simon Girty, a white man, Indian agent of the British Government. The defenders numbered but twelve men and boys, the rest having been lured into the woods and killed before the besiegers showed themselves. The defense continued most of the day, when ammunition ran short. A keg of powder was concealed in a house outside of the Fort, sixty yards distant. A young woman volunteered to go for it through a storm of bullets and returned unhurt. The defense was continued till aid arrived, and the savages retreated discomfitted, with a loss of *one hundred* killed.

Logan's Station was besieged from May to September, in this year. Powder giving out Logan took two of his men, and, escaping through the surrounding forest filled with Indians, traveled to the Holston settlement, two hundred miles distant, and back in *ten days*. At length help arrived from Virginia and the garrison was relieved after several months of siege. Through all the preceding winter the woods in the vicinity of the settlement swarmed with Indians. Provisions grew scarce. Though there was plenty of game it was dangerous to hunt. One youth of seventeen succeeded in eluding the watch of the Indians, and, through all the winter, escaped from the vicinity of his fort before day on the only horse that remained to the garrison, loaded it with game killed beyond the hearing of the beleaguering enemy, and, with an unfailing caution and skill, succeeded in returning at night, thus preserving the besieged from starvation or capture.

Even the children sometimes displayed the prudence and intrepid resolution which was the prevailing tone of the society about them. It is related that three boys, the oldest not twelve years of age, were surprised by a few Indian warriors on the banks of the Ohio, near Louisville, but out of sight of their home, whose locality was unknown to the savages. To have made it known to them would have been its ruin, and the death or captivity of the family. With great presence of mind, the boys misled them as to its nearness, and were carried far up into Indiana by their captors, the eldest boy, suppressing his grief and fear, keeping up the spirits of his companions, and by his liveliness and boldness pleasing the Indians. For some weeks they were held in captivity, when, being left in the care of an aged Indian and one or two women, during an expedition, the young hero killed them while asleep and succeeded in finding his way back to the river with his two companions.

Singular accidents sometimes occurred. Colonel Rogers was defeated in an accidental meeting with a body of Indians at the mouth of the Licking River. Captain Benham was disabled in both legs and another of the party was wounded in both arms. They alone of the survivors were left on the battle field, far from help. Here they remained for six weeks, the man with the sound legs but useless arms taking the man with good arms but useless legs on his shoulders to hunt and cook, and so preserved each other from famine and death. It was a trying, but often a romantic, time, because courage and ingenuity rose to match the difficulty.

The Cherokees, repulsed by the Tennessee settlers, attacked the outlying settlements of Georgia, North Carolina, South Carolina and Virginia within striking distance. The authorities of each of these states raised troops which marched into the Cherokee country and inflicted a punishment so severe that the tribe was reduced to the greatest misery and ceased to trouble the new settlements for some time.

In this year (1777), Bartram, an able botanist, visited the South, passed through the Creek nation, the English settlements on the Gulf and those on the Mississippi River. He found settlers increasing and many fine plantations in various parts. Pensacola had several hundred houses, and an active and lucrative trade was carried on with the Indians.

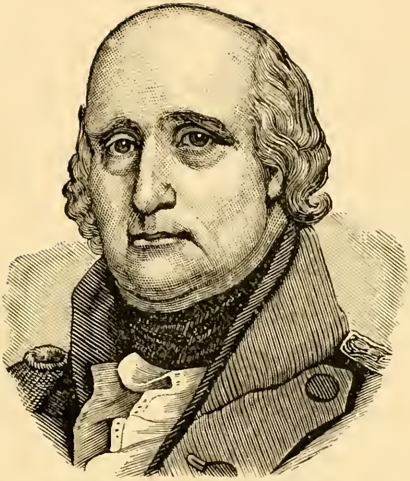
1778.—Boone was surprised and taken prisoner with twenty-seven of his men. All were well treated. Boone was greatly admired by the Indians, and they wished to adopt him into the tribe. Escaping from them at Chillicothe, Boone traveled 160 miles in four days, having eaten but one meal in that time, and prepared his fort to withstand a siege by several hundred Indians, who, he had learned, were about starting to attack it.

General Clarke made an expedition into Illinois and got possession of all the English posts in that country. With a temporary exception, they were held by the Americans during the remainder of the war, and a fort was built on the Mississippi River. This occupation, together with the heroic defense of the pioneers of Kentucky and Tennessee, secured the eastern Valley to the United States, by the treaty of peace made at the close of the war. It also protected the rear of the organized States from invasion by the British and their Indian allies. By defending itself, the West defended the rest of the country, and contributed to the establishment of American Independence. Clarke had, on his first invasion, but 153 men, a part of them being from Kentucky. A permanent settlement at Louisville was made in 1778. The inhabitants of Tennessee increased greatly in numbers and prosperity in this and the previous year. Kentucky continued to increase in population rapidly, though much harassed by Indian attacks.

1779.—Vincennes, in Indiana, which had been reoccupied by Indians and British troops after Clarke's capture of it, was recovered by Clarke, February 25, with eighty-one prisoners and $50,000 worth of military stores. Lexington, Kentucky, was settled April 17. In May, Colonel John Bowman invaded the Indian territory in Ohio. After burning Chillicothe and capturing 163 horses he retreated. Colonel Rogers, with seventy men, was attacked by a large force of Indians, near the mouth of Licking River, and only twenty whites escaped. Several new settlements were made this year in Kentucky. Titles to land having become confused and annoying, Virginia passed land laws and sent a court of commissioners to adjudicate on the claims. They sat until April, 1780, settling 3,000 claims.

Colonel Shelby attacked the Chickamauga Indians (Cherokees) below the rapids of the Tennessee River, with complete success. A settlement was commenced in Middle Tennessee, on the site of Nashville, this year.

1780.—The winter of 1779 and 1780 was extremely severe. Game in the woods and the stock of the settlers were often frozen and corn sold for $50 to $175 a bushel, in depreciated Continental money. There was much suffering. In June, a British and Indian force of 600, commanded by Colonel Byrd, of the British army, crossed the Ohio and ascended Licking River. They had six cannon. Two block-houses, or stations, Ruddle's and Martin's, surrendered at their approach.



GEN. GEORGE ROGERS CLARKE.

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ASTOR, LENOX AND
TILDEN FOUNDATIONS.

For the moment there were not, it has been said, over 300 able-bodied men in all the scattered settlements of the interior of Kentucky. For some reason not explained the enemy retreated after these two conquests. Gen. George Rogers Clarke collected the settlers and the troops in garrison on the river and invaded the Indian country in Ohio, destroying the town and stores of the Miamis, which checked Indian hostility for the time.

As soon as spring opened, a large immigration down the Ohio took place, three hundred capacious flat-boats, with families and stock, reaching Louisville, which was incorporated as a town, this year, by the Legislature of Virginia. Former settlements increased in numbers and many new ones were commenced, especially in the neighborhood of Louisville.

May 26, 1780, St. Louis, the capital of Upper Louisiana, was attacked by a large force, said to be 1,400 Indians and some English officers and Canadians. About sixty persons were killed and thirty taken prisoners, when the enemy withdrew, in fear, it was said, of General Clarke then on the Mississippi below, or from meeting with French friends among the citizens. St. Louis had then nearly 1,000 inhabitants. Clarke built a fort this spring, on the Mississippi, five miles below the mouth of the Ohio. The Chickasaws, who claimed that territory, complained that their permission had not been asked.

In this year, the Legislature of Virginia organized three counties in Kentucky. In Tennessee, the settlers organized a regiment to assist in repelling the British who were endeavoring to force Western North Carolina into submission. They joined with the mountaineers of Virginia and North Carolina and obtained the complete victory of King's Mountain, October 7, in which almost all the British troops were killed or taken prisoners. This severe loss was the turning point in the fortunes of Cornwallis. Thus, the West struck most effective blows for American liberty. A corps of these

Valley men remained east of the mountains to assist in the last campaign in South Carolina, in the following year. The Cherokees again commenced hostilities and marched on the settlements. Colonel Sevier met and defeated them, on Boyd's Creek. A larger force being gathered, the Cherokee towns were destroyed and the tribe forced to make a temporary peace. Emigrants followed this army to the French Broad River and settlements spread rapidly.

1781.—In this year a large number of unmarried women emigrated to Kentucky to find husbands and a home among the multitudes of unmarried men in that region. The Chickasaws attacked Fort Jefferson, on the Mississippi. General Clarke relieved, but afterward withdrew, the garrison. Colonel Brodhead led an expedition from the upper Ohio on an invasion of the Indian country without much effect. The Cherokees continued their attacks on unguarded settlers, and their country was again invaded and laid waste by the Tennesseeans. A settlement of Americans was formed at Bellefontaine, Monroe County, Illinois, this year.

1782.—Hostilities continued between Tennessee and the Cherokees, but the settlers there were so little scattered that they were able to rally in time to defeat an Indian expedition.

A party of whites from Western Pennsylvania marched against the Moravian, or Christian (Delaware) Indians, on the Muskingum, and nearly one hundred of these harmless natives were murdered, in cold blood, by white men! The inhuman act was universally reprobated. In Kentucky Capt. James Estill was defeated and killed, March 22; Captain Holder, August 15; and Colonel Laughery, August 22. Six hundred Indians and British besieged (August 15) Bryan's Station, defended by fifty or sixty men, but were repulsed with a loss of thirty men. They were pursued by 182 Kentuckians, who were defeated with a loss of sixty-nine killed, twelve wounded, and seven taken prisoners. It was a disastrous year for Kentucky. Gen. George Rogers Clarke gathered 1,050 men, in

September marched rapidly into the heart of the Indian country, 130 miles up the Miami, destroyed an immense quantity of valuable stores, belonging to the British, and the Indian towns and crops. Peace being arranged between the United States and England about the same time, Indian ardor was somewhat cooled.

1783.—Kentucky was made a Judicial District and a District Court opened.

In 1777 Tennessee had been formed into a county covering the whole state. It was called Washington. In 1779 Sullivan County was formed; and the third and fourth, formed in this year (1783), were called Greene and Davidson. A flood of immigration poured into both regions at the close of the war. But one store had ever been opened in Kentucky to this time. This year the second dry goods store was established at Louisville, by Col. Daniel Brodhead. Some distilleries were built this year in Kentucky.

1784.—Virginia ceded her lands northwest of the Ohio to the General Government, and Congress forbid settlement there until it could obtain titles by treaty and purchase from the Indians. A store was opened in Lexington this year. An extensive movement toward the West after the war, especially by officers and soldiers of the disbanded armies, very soon doubled the number of inhabitants, and nearly all the choice lands then open to settlement were entered in the Land Offices. The first court house for Washington County, Tennessee, was built, being the first in Tennessee, and, for the first time, a wagon road was opened to the east, from Holston River.

1785.—The rivers rose this spring to an extraordinary height, the Mississippi reaching thirty feet above the highest water mark ever known. May 23, a convention held by the Kentucky settlements urged separation from Virginia, and the formation of an Independent commonwealth. Another convention assembled August 8, and employed still stronger language in its addresses to Virginia and Kentucky. Various new towns were founded, and counties formed, in Kentucky. The Indians began to renew their hostilities, and to murder scattered settlers in all parts of the West. A treaty with them was concluded, by General Clarke and others, at Fort McIntosh, at the mouth of the Miami River, which, however, the Indians did not respect. They stole, October 26, sixty horses near Maysville, Kentucky.

In 1784, North Carolina made a conditional cession of Tennessee to the Federal Government. That state had not organized the Tennessee settlements with the thoroughness which their effective defense against the Indians required, nor was the United States Government prepared to do so. The settlers lost patience, called a convention, adopted a constitution and organized the "State of Franklin," or Frankland. The first session of the Legislature of this self-constituted state terminated March 31, 1785. North Carolina considered this action a revolt, its Legislature repealed the Act of Session and proceeded to make laws for the Tennessee counties as before. The Tennesseeans persisted and maintained an independent state organization for several years.

The Illinois settlements were enlarged in 1785, and also in the following year, when Indian hostilities recommenced. Several settlers were killed and others taken captive. Gen. George Rogers Clarke undertook an expedition against the Indians, which, from various causes, accomplished nothing. Colonel Logan raised about 500 men, penetrated the Shawnee country, laid waste eight towns, and killed and captured about a hundred warriors, with a loss of but ten men. Spain refused the demand of the American Government to permit the free navigation of the Mississippi; some of the Eastern statesmen were inclined to acquiesce, to the great discontent of the settlers in the Valley, who seemed inclined, in that case, to set up a separate government. But patriotism and good sense were not wanting to both parties and violent ill-feeling subsided in a few months. The "*Pittsburgh Gazette*," the first paper published in the Valley, issued its first number July 29, 1786.

The immigration now numbered yearly, from two to four thousand persons, and it is said that 20,000 troops could have been raised west of the mountains.

The Cherokees continued to murder settlers and another expedition against them held them somewhat in check.

1787.—A convention of Kentuckians assembled at Danville, the capital, to confer in regard to the closing of the Mississippi. Finding that the General Government insisted on maintaining the rights of the American settlers in the Valley, and was disposed to defend them against Spain, they quietly dispersed. General Wilkinson went to New Orleans with tobacco and other produce and obtained permission from the Spanish Governor to transport, free of duty, on his own account, all the products of Kentucky.

The "*Kentucky Gazette*" was now established at Lexington, being the first newspaper in the state and the second in the West. The settlements in Middle Tennessee, on the Cumberland, had grown rapidly, but were much harassed by the Cherokees and Creeks. An expedition against them from Nashville this year, checked their ravages. The Ohio Indians were constantly hostile, killing and taking prisoners many of the Kentuckians. The "Ohio Company" was formed, in Boston, Massachusetts, in 1786, and, in this year, purchased one million and a half acres in Ohio, to which private speculations of men eminent in public position added three and a half millions more, and more than three hundred thousand acres were granted as bounties to soldiers and actual settlers. The Ohio Company organized beforehand a local government and made all arrangements for a vigorous settlement. Congress provided for the general government of the whole territory in the famous "Ordinance" of this year. General St. Clair was appointed Governor, and 700 troops were ordered to the West, for the defense of the settlers.

1788.—The "State of Franklin" by this time began to lose its vitality. North Carolina had pursued a firm but conciliatory policy, and, early in this year, the unauthorized government broke down and disappeared. Serious trouble with the Indians continued everywhere. The Creeks were at war with the people of Georgia and massacred the border settlers without mercy.

The 7th April, 1788, is memorable as the day when the first permanent settlement was made in Ohio, by an advance party sent by the "Ohio Company" to prepare, at Marietta, on the Ohio, at the mouth of the Muskingum, a fort and houses for the families that were to follow. Many thousand settlers pushed their way across the mountains this year.

Two other settlements were formed in Ohio in 1788, one being at Cincinnati. The Spanish authorities at New Orleans, and the Spanish Minister to the United States, in this year sought to detach the Valley from the Union, urging Kentucky to declare herself independent, offering many advantages of commerce and trade to a new govermnent; but, with all the disadvantages of distance, great difficulty in communication with the Atlantic States, and the ineffectual protection afforded by the Republic to the frontiers, constantly laid waste by the Indians, the people remained fairly loyal to the Union.

1789.—In this and the following year eight different settlements were made in Ohio. Kentucky was more harassed by Indians than Ohio at this time. In this year the eighth Kentucky Convention was held, in relation to the formation of a state, and Virginia passed her fourth Act of Separation. There was opposition in Congress to its immediate admission, the northern representatives desiring Vermont, a free state, to be admitted at the same time.

1790.—A ninth convention accepted the conditions of Virginia for separation, and arrangements were made for the admission of Kentucky as a sovereign state in 1792. The population was now 73,677; of which 61,133 were white, 114 free colored, 12,430 slaves. The whole Valley had about 200,000 inhabitants. General Harmar marched against the Indians but was unsuccessful.

Tennessee received a Territorial Government in this year, William Blount being appointed Governor by President Washington. Tennessee had about 37,000 people.

1791.—The entire frontier, from the Mississippi to Pittsburgh and Georgia, was harassed by the Indians, and preparations were made to chastise them.

In February Congress agreed to admit Kentucky as a state, June 1, 1792. In May Gen. Charles Scott marched against the Indians with 800 men (Kentuckians), defeated them several times and destroyed several towns. In August Colonel Wilkinson led a similar expedition toward the Wabash with similar results. Governor St. Clair, the General-in-Chief, with an army of 1,400 men, was totally defeated farther in the interior, November 4—890 men and sixteen officers being killed and wounded.

November 5, 1791, the first newspaper was published in Tennessee, called *The Knoxville Gazette.* The town of Knoxville was laid out in this year.

1792.—June 1, Kentucky became a state, and on the 4th the new Legislature met. A new army was gathered for the protection of the frontiers; Gen. Anthony Wayne was appointed commander, and spent a year in drilling it. Frankfort became the capitol of Kentucky, and several towns were founded in that state, this year. Colonel Hardin and Major Truman, peace commissioners to the Indians, were killed. November 6, Maj. Adair, commanding 100 men, was defeated, near Eaton, Ohio.

February 17, 1793, General McGillivray, a half blood, and chief of the Creeks, a man of education and great abilities, died. His rank as General was conferred by Washington. He received salaries from both the United States and Spain, was an astute diplomatist, and very wealthy. The Tennesseeans and Georgians waged a bloody war with the Cherokees and Creeks. The last Indian invasions of Kentucky occurred this year. General Wayne did not get ready for his grand expedition until the season was too far past for a campaign, and deferred it to the coming year. November 9, the first newspaper in Ohio was established at Cincinnati. It was called *The Sentinel of the Northwestern Territory.* Kentucky was actively organizing its State Government. Many new settlements were commenced, especially south of the Ohio. The Ohio settlers were in constant danger from the Indians.

1794.—Governor Simcoe, of Upper Canada, erected an English Fort at the rapids of the Maumee, in April of this year; agents of Spain stimulated the Indians to hostility to the United States, and French agents endeavored to organize an expedition among the Kentuckians to attack New Orleans. The growing importance of the United States in the Great Valley became more and more evident each year. The general government, through 1793, made every effort to procure a peaceable settlement with the Indians, which was one reason for the delay of General Wayne's attack; but the Indians insisted on the withdrawal of all settlers to the south of the Ohio, and effective negotiations failed.

July 26, 1600 Kentucky volunteers joined General Wayne's army, and, August 20, he defeated an Indian force of 2,000, after an hour's fight, and pursued them two miles, up to the guns of the British Fort. The battle ground was eleven miles southwest of Toledo. The Americans had thirty-three killed and 100 wounded.

For fourteen years the inhabitants of Middle Tennessee had been constantly exposed to the attacks of the Cherokees and Creeks. In numerous expeditions they had retaliated and preserved their settlements from total destruction. On the 13th of September, 1794, the inhabitants—who had been more than usually harassed, many families and individuals having been killed, and nearly all the horses in Middle Tennessee stolen—assembled to chastise them, invaded the Cherokee towns, and fought a decisive battle, which procured a tolerable state of peace, lasting until the war of 1812. In this year a Territorial Assembly was first elected. It met at Knoxville, in February.

The General Government had much difficulty in restraining the tide of immigration on all the borders within the limits of purchases made from the Indians. The Georgians, especially, constantly pressed on the Creeks. Georgia claimed the whole territory lying west of it to the Mississippi River, and made treaties and sales of land in defiance of the Federal authorities, and to the intense disgust and rage of the Creeks. In this year Georgia sold large sections of Alabama and Mississippi to various land companies. The contracts were repealed by the next Legislature, but many hundreds of settlers had spread over portions of the lands. These held their ground, laying the permanent foundations of settlements in the territory, afterwards erected into those states ; but, unhappily, the discontent of the Creeks, restrained for some years, and then inflamed by Tecumseh, produced the terrible retaliation of the Creek War of 1813 and 1814.

1795.— The old Indian Wars were now brought to a close. August 3, all the tribes of the Upper Valley signed a treaty, at Greenville, Ohio, which continued in force until 1811, when Tecumseh united the tribes for another effort to preserve their hunting grounds.

With this year closed the perils from the Indians on the Ohio and its tributaries. Nearly the whole of the present state of Ohio was now open to peaceful settlement. Forts and settlements in Indiana on the Ohio, Wabash, and Maumee Rivers offered further security to Kentucky and Ohio, but the Indians were completely cowed, for the present, and heroism had henceforth only nature and the want of markets to struggle against.

It is remarkably characteristic of the native American that this deadly struggle had no depressing effect, but, on the contrary, was a healthy stimulus to the new settlers. Every blow was returned with interest, all distress and trial was borne without murmuring, and the axe, the hoe, or the rifle were used in turn with equal cheerfulness and resolution. But it left a deep impression on the character of the people, which was intensified and developed by later circumstances and events.

This period has been presented in the form of a condensed chronicle, to indicate the more important of the events that crowded it with excitement and showed the heroic daring of the first settlers. A detailed narrative would require too much space.

CHAPTER IX.

WHOLESALE SETTLEMENT UNDER DIFFICULTIES.

Kentucky became an independent State just before the close of the Indian War, and Tennessee just after. The early explorations had been made under imminent danger. Indeed, many of the first companions of Boone fell under the Indian gun or tomahawk before he took his family into the dangerous wilderness. Cabins were raised and cornfields cleared, planted and gathered while the exasperated Mingo chief, Logan, was taking a terrible vengeance for the brutal murder of his family, and the year following Kentucky received 500 settlers. These were the two Heroic States. The birth of their settlements occurred while the thunder of commencing war was rolling, peal after peal, from Lexington and Bunker Hill to Savannah, along the Atlantic coast. Their youth was passed under constant attacks from the Ohio Indians on the north and the Cherokees and Creeks on the south. In the meantime the new born states of the coast had their hands abundantly full in asserting independence of the strongest maritine power in the world, whose attacks were invited by a long line of unprotected coast.

The heroes of the wilderness did not emigrate to fight the Indians, they would gladly have kept the peace, but their presence, and especially their agricultural clearings and comfortable log cabins, which indicated an intention to stay, were regarded by the tribes as a declaration of war. They could hope for no certain aid from the other side of the mountains. They might feel happy if they could obtain powder and ball to protect themselves. "But none of these things moved them." The fruitful soil, and sunny bottoms, and shady slopes drew them with an irresistible attraction. All that was dear and valuable to them was in constant danger of sudden ruin from a foe that knew no pity and spared neither the harmless child, the helpless woman, nor the property he could not carry away. They were ever ready for a stout defense, to strike a quick, sharp blow and then to offer peace, that they might resume the axe and the hoe. They were neither fierce, revengeful nor melancholy. They bore up hardily against ill fortune, and cheerfully, even gaily, enjoyed all the good they could win and whatever sunshine fell to their lot. So the deeply tried pioneers held their ground, sent cheerful hails back across the mountains, and thousands, kindred to them in cheerful resolution and contempt of danger because they were strong in the hope soon to become prosperous farmers, constantly joined them.

Want of a standing body of soldiers to watch and ward off danger, want of means, and even of weapons and munitions of war, want of organization and authority to act when action was pressingly required, added unspeakably to their difficulties and calamities through the whole period. By the time these embarrassments were overcome through the state organizations, which permitted efficient action and prevision in their own behalf, the danger was over. They had borne patiently the fearful heat and burden of the day, and now they were at liberty to care for their individual, social and political interests without disturbance. The best lands had already been taken up, their healthy, bold and hardy children were thronging around them and immigration began to fill up all the corners and gaps between their settlements.

The new lands beyond the Ohio were now opened and the great and promising West began to attract New England. But the "Old Settlers," of ten or twelve years, who had cleared the way for two lusty young commonwealths, were still the heroes of toil, privation and labor. They hurried across the Ohio by thousands to commence anew on a still richer soil and under more favorable circumstances, and gave an important degree of tone and direction to the new commonwealths of the Northwest. For twenty-five years settlement was to proceed under great difficulties. There were no roads to the East; for ten years the Mississippi was practically closed to trade, and when the vast Louisiana territory was acquired and the Mississippi was all their own, the transportation and the markets in that direction were quite as inadequate to the needs of the large population then gathered in the upper Valley as in former years. There was still abundant opportunity to struggle with difficulty, for everything necessary to the development of a vast region and a civilized people was yet to be created. Kentucky and Tennessee, as lying further east and now comparatively old regions, were in the best circumstances.

In seven years from the close of the Indian War, the Northwest Territory had gained at least 75,000 inhabitants, besides those previously there, those who had been born, and those who had died. A large part of these had crossed the mountains; many of them had traveled nearly one thousand miles from their starting point, over roads rude and poor, even in the settled part of the East, but for the last few hundred miles, indescribably rough and difficult. Perhaps an average of fifteen to twenty thousand crossed the mountains to different parts of the Valley each year. With infinite patience and toil they climbed and descended the steep ridges, and labored across the levels through deep ruts and mudholes, and then had some hundreds of miles farther to travel, often through a pathless wilderness.

Only the most indispensable articles could be transported so far, and when the journey's end was reached, they were at the beginning of a mighty task. The heavy forests were to be painfully laid low, and then their branches and trunks must be disposed of; the houses and barns were to be built; the conveniences and comforts of life were to be created, within and without. Nearly all this must be the work of their hands, for although the virgin soil would readily give them abundance of surplus grain, there was little market for it at any price. Difficulty and distance made exchanges with the outside world nearly impossible. A little found its way to New Orleans; a little filtered across the mountains to the Eastern seaboard; and thousands of incoming settlers, who were to be supplied for a year or more, with the mechanics and traders of the towns, made a small local market. As a rule, rude comforts were abundant and luxuries very difficult of attainment—when known at all.

As the years wore away, however, the arts of the East were gradually introduced, the new became old, and difficulties were more or less overcome, although the plenty itself became an increasing embarrassment; for the cultivated areas of productive soil enlarged more than the markets they could reach. The attraction of the West had been such that when the nineteenth century opened the population of the Valley, all told, was not far from half a million—two thirds of which was in the upper Valley. During the first ten years of the century the increase was very large indeed, for, by the census, the population was, in 1810, about 1,300,000. Ohio and Kentucky had received more than half of this increase; Tennessee and Mississippi about as much together as Kentucky; Indiana, Missouri and Louisiana together about 100,000; Illinois about 10,000, and Michigan probably 1,500. Population was largely concentrated near the rivers, especially the Ohio, whose shores began to bear the appearance of a long-settled region. The resolute energy of the people soon introduced order and all the improvements within the reach of labor. Much money was invested from the East, or found its way up the Mississippi.

And now followed three years of war, full of apprehension on the borders where the Indians still held their lands and resolved to make a final stand under Tecumseh, aided by the English Government, against further loss by treaty or force.

Again it was dangerous to be found in the woods alone in Indiana, Illinois and Northern Ohio, or to build the log cabin distant from strong settlements. Yet it had become the habit to organize, and territorial officers were at hand to take the initiative and guard the points of danger. The population of the East was still eager to get to the Land of Plenty and Hope, and, as before, war did not prevent immigration, and the more that it was the war of the Government in a somewhat different sense from the war of the Revolution. Tecumseh's wider plans among the Western tribes were a failure from the first. The battles were fought by the regular soldiers and their presence, and the expenditure of Government funds in the West, made an unusually favorable opportunity for the sale of produce. The commerce of the Atlantic cities was dried up by the war on the ocean, and distress fell on the East, while the old plenty still reigned in the West. The land victories of the war by Western generals about Lake Erie and at New Orleans, the death of Tecumseh and the complete subjugation of the Creeks, filled the men of the Valley with pride and enthusiasm and reflected honor on the West and the South.

Pointless and unsatisfactory as was the close of the war with England, in some respects, it was a complete triumph to the Valley by removing effectually the old barriers to advancement. The Indians of the eastern Valley gave up the attempt to stem the tide of aggression and consented to the sale of such lands as were required for settlement. The wild lands of the West had been repeatedly traversed by soldiers, and otherwise more completely studied; the Government and eastern people now fully comprehended that the body of wealth and the greatest sources of prosperity and power lay in the West; and a fever for improvements that should make it more accessible grew fast. The road from Philadelphia to Pittsburgh was improved. A great national road, called the Cumberland, opened the way from the southeast far into the

Valley; the building of the Erie Canal was begun; steamers began to ply on the rivers; Ohio soon undertook to connect the river on the south with the lake on the north; and other improvements began to smooth the great difficulties to immigration and prosperity in the northwest. Since 1810, Ohio had increased her population, according to the census of 1820, by 200,000; Indiana and Illinois had become states, and Missouri was only waiting the final act of graduation. The great work of opening the newer parts of the country was still done, however, under difficulties quite unknown at later periods.

The lower Valley had wonderfully prospered in settlement since the Louisiana purchase. Settlements had penetrated Alabama from Mobile up the rivers from the south, and as an extension of those of Middle Tennessee on the north. In 1810 there were 10,000 or more whites and negroes in Alabama; Mississippi had grown greatly both from the Gulf and the River; Louisiana had become a state in 1812. Access to these regions was not so difficult as to the upper Valley. The borders, and parts of the interior, were reached from the sea and from the upper Valley by the Great River, while no mountains separated them from the Atlantic coast. When the hostility of the Creeks was overcome, and the Chickasaws and Choctaws became willing to sell large tracts of their lands, government roads had been long built toward the east, over which the cheerful and patriarchal planters of Virginia, the two Carolinas and Georgia had passed with their troops of servants, herds and flocks, and their comfortable furniture. Settling largely along the rivers, navigable to the Gulf, they had less difficulty in finding a market for their productions as they began to grow in volume; cotton, sugar and rice were profitable, because confined to that climate, and they only needed the result of Jackson's conflict with the Creeks to render them wealthy and strong from Louisiana to Georgia. Mississippi and Alabama became states before 1820, and since 1810 the emigrants to the "Louisiana Purchase," who had crossed the Mississippi River to seek homes, numbered one hundred and fifty thousand.

Thus the close of the war in 1815 dated the dawn of a new era, though it was not fully opened till about 1820. Difficulties, however, were not regarded. The people of the East were eager to reach and develop the treasures in the glorious agricultural Valley that had waited so many thousand years to be thoroughly comprehended. They and the Valley were perfectly matched at last.

In 1820 the Valley had nearly the same population as the thirteen colonies when, in 1769, Tennessee received her first settlers—or 2,500,000. Indiana and Alabama had each received about 100,000 since 1815 ; Illinois, about 40,000 ; Kentucky and Tennessee each about 150,000—Tennessee this time leading in the number, perhaps from the larger emigration from Kentucky across the Ohio and Mississippi; but both contributed largely to the increase of newer regions. They two, with Ohio, sent at least 100,000 to set an example of bold and strong, if uncouth, frontier virtues to the settlers of the prairies from older states beyond the mountains.

Thus, after the war there was a sudden diffusion of settlement, led, perhaps, by the mania for speculation as much as by the more moderate desire for a home and property in a soil each farm on which was worth a gold mine. Towns sprang up as by magic, and he who secured the location before its future could be generally comprehended became at once a rich man through the rise in the value of the lands. This spirit has often been ridiculed by people from more staid communities whose age of rapid growth was long past, but they must be a very careless and thriftless people who are so insensible to the love of gain as not to be moved by such wonderful opportunities. It had, indeed, some disagreeable and demoralizing features; but they were displayed quite as much by shrewd men who lived by their wits in the East as by actual residents in the Valley.

Transportation on the rivers still continued to be chiefly by flatboats, keelboats and barges, of rude and cheap construction, floated down by the current and propelled against it from below by the stout and muscular arms of hardy men. They were often of large size, containing one or more families with their household goods, farm implements, stock and more or less provisions if they were going to the backwoods. These family boats were of all sizes, and made the great water highway an enlivening spectacle. But multitudes of flatboats were loaded with farm produce, which was taken down to New Orleans for sale, the boats there broken up for lumber, and the crews journeyed back by lighter boats, by land, or, in the later years, by steamboat. These flatboats continued to be in use until the days of railways, notwithstanding the multiplication of steamboats. They were cheap, grain and other produce from the upper Valley was low in price and time was not so valuable to men then as now. They counted many thousands almost up to 1850.

This gave rise to a class of boatmen for whom a rude life had attractions, who were often boisterously rough and sometimes criminally violent, among the quiet river towns; but usually they were so under the influence of careless merriment rather than malice. Boisterous joke, and jest, and song echoed from the river banks from Pittsburgh to New Orleans. It was the unpolished, but free and essentially just and manly, opening of a new phase of human experience—a new nation was displaying the lusty vigor of its youth and developing, in unrestrained and uncultured fullness, the leading characteristics of the future in the generous and smiling Valley.

The efforts and expenditures of the General Government, of States, and of private wealth and enterprise gradually ameliorated the difficulties of the primitive times of settlement. But at the close of the war, forty years after the strong commencement of the stream of immigration had fully settled the fact that the West was to be immediately occupied by Anglo-Americans, the life of the people was still that of pioneers, buried in the heart of the continent. In 1816 there were no markets to speak of but those supplied by the people themselves and the vast immigration. Luxury and elegance were to be found, to some extent, in the towns where outside wealth had surmounted all difficulties, and ingenious skill had created *comfort* in a still wider circle; but among the people at large the early difficulties still remained. Food was abundant and the more substantial requirements of life were nowhere lacking. A primitive simplicity and heartiness reigned. Kentucky and Tennessee, as the longest settled, the most inured to deprivation of the thousand accessories of prosperous social life in older countries, furnish the strongest picture. All that grain and vegetables, the game of the forests and the herds, flocks and poultry yards could furnish, were enjoyed in unlimited abundance. To these add fish from the streams, the products of the dairy, wild and cultivated fruit, with maple or New Orleans sugar as a rarity, and the kitchen may be considered richly supplied with the healthiest and the best materials for the table. No necessities of economy restrained hospitality; a frank, cheerful and independent spirit had largely abolished the idea of social distinctions except between the white and the black; the difficulties of beginnings were past and the situation did not yet permit much opportunity of large acquisitions from agriculture. Therefore there was little to check social intercourse, there was leisure, abundance, and general sympathy to promote it.

The social habits of the times were unrivaled, perhaps, in any time or place, for geniality and heartiness. This was a general tone through all the Valley, varied north of the Ohio by the more thrifty and provident habits of the New England settlers, whom, yet, the peculiar circumstances inclined to greater openness of heart and hand than accorded with their ordinary habit. Dangers, privations, hopes and plenty shared together, while yet the elements of society were unclassified, produced singularly pleasant intercourse. This was often intensified by its rarity in a region so large, where farms and settlements were frequently separated by great distances. Churches and religious organizations were rare, and great gatherings in "camp-meetings" became a feature of the Central Valley. These were held in the delightful forests, and gathered all the inhabitants, to the number, sometimes, of many thousands, from great distances around. They, in part, served the purposes of social meetings and of the politician, who courted acquaintance and public favor, as well as of the earnestly religious. Social life had then its Golden Period. It was never more free from the deceptions, hollow appearances and envies of an older country. Dress was simple, inexpensive, and chiefly homespun; manners were truly cordial and free, and life was so healthy that there was comparatively little vice. It was the frank, open, generous *youth* of society, before the cares, ambitions and antagonisms of later life have begun.

This condition was very gradually changed in after years, though the locality was subject to constant transfer. The towns were already much like Eastern towns, and society there was more or less collected around natural centers. Character and condition had begun the work of analysis and separation. The introduction of steam on the rivers, the spread of a speculating mania, and the gradual withdrawal of the wealthy, educated and ambitious into social coteries by themselves, soon raised distinctions, in the older regions, but community of feeling and free hospitality traveled westward with the new settlements.

By 1820 the depression of the war, the increase of steamboats on the rivers, and the opening of other channels of communication, had raised the number of recent settlers above that of the older residents, and considerably modified the character of pioneer life. The poor of Europe flocked in, the educated youth of the East, who hoped for more rapid advancement, came West, with enterprising men of business, who looked forward here to larger fortunes more easily made. What would become of this medley of people of such diverse training, habits and character? The question was often asked by the philanthropist and statesman with much anxiety.

CHAPTER X.

THE STEAMBOAT ERA.

The feeling of isolation in the upper Valley from the markets of the East grew as the immigration became wholesale. Not only was the distance to tidewater towns across the mountains far more difficult to pass than that across the Atlantic now, but the distances were so great in the Valley itself, by want of roads and the circuitous routes by the rivers, and by the impossibility of employing the wind as a motive power, to any great or certain extent, that the moving of the only materials whereby wealth could be accumulated became increasingly burdensome and unprofitable. The larger the area opened for cultivation the less valuable had produce become. The distance from New Orleans to Atlantic seaports by sailing vessels was great and the passage perilous.

So costly was transport, even to those who lived immediately by the rivers, that little was to be made, and a vast amount of labor was required to compass that little. It had its compensations in making the inhabitants of the extremes of the Valley known to each other and entered as an element of culture into the life and thoughts of the backwoodsmen. It also strengthened the bonds of union between the distant parts of the country, which was no small matter at this early period.

Yet, those who could only find good lands at a distance from the streams obtained little pay for anything they could produce. The cost of getting it to market was too great, the Valley was too prolific for so large a number of farmers and so much isolation from the world of men and the centers of trade. But when this difficulty began to threaten to crush the poorer and later immigrants a new motive power was developed to wonderful efficiency. The Age of Steam was fairly opened about 1820; just when, but for it, the progress of the Valley would have been crippled. With the steamboat the whole situation was changed. Now, a voyage to New Orleans from the extremes of the upper Valley could be made, and the returns effected, in less than a month, without the painful labors and exposures that often shortened the lives of the boatmen. The steamboats were capacious and could take vast loads down the river in a few days. The river system of the Valley seemed the true home of the steamboat and the improvement was immense. A vast distance was almost annihilated by this wonderful mechanical force, and the pulsations of the steamer gave a richer and more successful life to the struggling farmer far in the woods or on the most distant prairies. It was the power needed to give a lively circulation through the whole body of the Valley.

The result, as condensed from official and other documents of the time, was substantially as follows: There were 8 steamers built on the Ohio previously to 1817, some of which did not return after descending to New Orleans, being retained there for local trade, or other reasons. They were the trial boats, and it was still some years before steam began to aid directly and largely in the prosperity of the whole Valley. By 1825, so great was the ingenuity and enterprise applied by the bold and active men of the West that a hundred or more were in use, and some of them were considered the finest boats, both for service and elegance, in the world. Thus the manufacturing industry of the Valley wrote "Excelsior" on its banner of progress in the early days.

From 1819 to 1829 the whole number of steamboats built was estimated as embracing a capacity of 56,000 tons, at a first cost of $5,600,000, with repairs amounting, in the same time, to $2,800,000. In the year 1829 there were over two hundred steamers in use, having a capacity of 35,000 tons, their expenditures for fuel, hands, food and other things amounting to very near $2,500,000. These boats made five or six trips in the year. Twelve years before (1817) the trade of the Ohio Valley and "Upper Country" was estimated at about 2,000 tons annually, in boats which made but one trip in the year, with very little expenditure to enrich the settlers on the way.

In 1834 the number of boats was 230, with an aggregate capacity of 39,000 tons, and the running expenses amounted to $4,644,000. The amount of fuel consumed in the year cost nearly $1,500,000. These boats were more cheaply built than in earlier times, and the capital invested in them was estimated at $3,000,000. Thus over seven and a half million dollars were spent in the Valley merely in *conducting* the business. In 1832 it was estimated that, besides the steamboats, 4,000 flat-boats descended the river, the whole expenditure on them, including their expenses, being $1,380,000; while the cost and expenses of the steamboats in use that year were $5,906,000. The value of the produce exported on them was estimated at $26,000,000. This was more than $30,000,000 distributed broadcast over the Valley by the commerce of the rivers. The number of persons deriving their subsistence from employment in connection with the making, repairing and working of the boats was believed to be about 90,000. These persons furnished local markets to the agricultural producers, and the cash amounts realized by the farmers, chiefly of the upper Valley, were millions on the sale of their crops, besides their own support. This continued to increase at a large ratio, for, with results so excellent, immigration increased, facilities for transportation multiplied, and markets enlarged. The effect of this commerce in cheapening what the people of the Valley wished to import from the Eastern States was great. The carriage of goods from the seaboard to Pittsburgh was long estimated at $5 to $8 per hundred pounds. They could often now import from Philadelphia by way of New Orleans for $1 per hundred—a vast gain to the purchaser in the Valley.

Official statistics in 1842 indicate an immense development of internal commerce on the rivers and lakes in eight years. Six hundred steamboats and four thousand flatboats were then employed. The tonnage of the steamboats was 126,000. This was largely in excess of the capacity of the entire steamboat tonnage of the British Empire at that time. More than 200,000 persons were directly employed in expediting this navigation, and the cost of the boats, machinery, furniture, and entire annual expenses counted up to about twenty million dollars, about fifteen million of which was spent annually in the Valley. As the increase in tonnage was more than three hundred per cent in ten years, we may suppose that the trade, and its profits to the Valley, had increased in the same proportion.

It is stated that the entire tonnage of all vessels in the United States was but two thirds that of Great Britain at this time; yet the steamboat tonnage on western waters exceeded, by about one third, the same class of vessels belonging to that "Mistress of the Seas." This fact is an eloquent comment on the intelligent energy *gained* by Anglo-Americans, since, as Anglo-Saxons, they had emigrated from England. The mixture of other nationalities had not weakened either intelligence or energy. Finding a new and suitable instrument for use, they developed it, notwithstanding their want of capital, of skilled labor, and in spite of various other difficulties, with a vigor that put the extreme resolution of England to the blush. In these instruments of internal commerce it was estimated that, in 1842, $220,000,000 worth of commercial exchanges floated on the western waters. At this time the entire imports and exports of the whole United States amounted to a little less than $250,000,000. If the coast trade of the Southern States and rivers not included in the $220,000,000 be added—and it was extremely valuable, being chiefly cotton and rice for export, and much of the provisions of the Southern people, besides almost all the manufactured articles they required in exchange—the trade of the Valley must have been considerably in excess of the whole foreign trade of the country.

The southern Valley was now in a full tide of prosperity, and gave itself up almost exclusively to the cultivation of its three staples, cotton, sugar and rice. It expanded and glowed under its warm southern sun, by the enterprise and wealth of its planters and the toil of its dusky laborers. The planters loved space, and large plantations everywhere increased. The Indians had been removed and their territories occupied; Texas was about to be added, and room was abundant. The smaller streams bore the cotton to the coast; the rice and sugar found their best locality near it. Thus, from the Lakes to the Gulf, the intelligent and forceful inhabitants found every desirable opportunity for profitable enterprise. All the regions of the Valley offered perennial springs of wealth to a people who knew how to open them, and never had a people shown this ability so eminently as those who had now found their way here.

In 1820 the preliminaries necessary to the commencement of the actual development of all the fields of activity and income in the Valley had been supplied. Suitable institutions and a fairly enlightened political economy had been devised, set in operation, and found to work fairly well for the time; embarrassing foreign influences had been removed; population had been diffused sufficiently to bring all the sources of strength to the support of the shrewd energy of the people, and the application of steam as a motive power was about to multiply a hundred fold the effectiveness of those energies, and supply the great lack of population for the vast work to be done. A large flatboat on the Western rivers required forty to fifty men; a steamboat with the same number carried perhaps ten times the burden in a fifth part of the time, could ascend the current easily and speedily, and make several trips during one season.

In 1817 the Erie Canal, connecting the waters and navigation of Lake Erie with the Hudson, was commenced. It was finished in 1825. Pennsylvania, Ohio, Indiana and Illinois, in due time, followed this example; the wagon road from Philadelphia to Pittsburgh was improved; and the Cumberland road rendered communication between the Potomac and the Ohio Rivers easy. Although the completion of all these channels of internal commerce required more than thirty years, some of them were well advanced in 1820, and a journey from New York, Philadelphia, or Baltimore to the centers of population in the Valley was as rapid and easy as one from Boston to Philadelphia in the first years of independence. The East and the West were joined by the strong ties of interest and trade.

The effect of the greater freedom and ease of communication on the progress of settlement, during this third period of Valley growth, was very remarkable. By 1830 the population of the Valley was 4,190,000—an increase of nearly two million in ten years. Indiana, Tennessee and Alabama had each gained, in the ten years, about 200,000 inhabitants; Ohio, 350,000; the other states from sixty to two hundred thousand each; Michigan about 23,000; Arkansas 15,000. In 1840 the population of the Valley was over 6,700,000, the greatest gains being made in the three states lying north of the Ohio River; Alabama, Mississippi and Michigan come next; followed by Missouri, Louisiana and Arkansas. From 1840 to 1850, the gain was about three and a half millions. About one third of this was gained in Indiana, Michigan, Illinois and Wisconsin; more than one fourth crossed the Mississippi, and the remainder settled in the states lying between Lake Erie and the Gulf. The population of the Valley in 1850 considerably exceeded that of the whole country in 1820—rising above 10,000,000. Yet, in 1860, the census showed a *gain* in the Valley almost equal to the population of the whole Valley in 1840.

Between 1840 and 1850 Illinois gained more than 400,000 inhabitants; Indiana over 300,000; Michigan nearly 350,000; Wisconsin 275,000; Iowa 150,000; Missouri almost 300,000; Arkansas 100,000; Louisiana 235,000; Mississippi 370,000; Alabama about 280,000; Texas 100,000 or more. Ohio beat them all, gaining 470,000. Kentucky people had a fancy for emigrating, to "grow up with a new country," and gained but 90,000. Tennessee increased by 140,000. These were vast changes to take place so suddenly. In a single generation a wilderness had become an empire. Many a man who had fought the Indians in Kentucky and Ohio in his youth lived to see the Valley under the aspect of an old country, himself as lost amid its busy and thriving millions as he had often found himself, in early life, among the pathless forests. Cities and towns had sprung up, as if by magic, along the rivers and lakes. Canals, whose united length might almost span the continent, were channels of busy activity, and many hundreds of steamers constantly vexed the waters of the great rivers.

Yet, this was only preliminary to the greater growth that was to follow. The cotton of the southern Valley and the grain of the northern could not get to the seaboard fast enough, with all these outlets. Inexhaustible fertility supplied so large a surplus that food was cheap and it would not pay to cultivate land away from the rivers, and the spaces were so vast that ten millions of people could only skirt the streams and cover the more accessible prairies. A new carrying agent, of greater compass and speed, was required. But neither nature nor circumstances seemed willing to deny anything to the Beautiful Valley, and what it required was forthcoming. With 1850 commenced the great development of the Railway System.

CHAPTER XI.

THE RAILROAD ERA.

The floating commerce of the West had reached the value of $500,000,000 before 1850, the number of steamboats rising to 1,190 as early as 1847; and yet the increasing abundance of the products of the soil kept all the channels of exit glutted, or, if they were not, it was only that the requisite cheapness of transport failed, and that it was unprofitable to raise all that the Valley so bountifully offered to the labor of its favored possessors. The situation and aims of southern agriculturists confined them to their special staples and prevented a general development of all the resources of their section; they fell behind the North in various lines of progress, and both foreign and domestic markets were to be sought through the commercial and manufacturing cities on or near the coast of the North Atlantic. Steamboats could not reach these markets directly east, the canals were not adequate to the immense business from Lake Erie; the roundabout transport by New Orleans from the upper Valley, with the hot tropical seas, and the dangers of the South Atlantic coast, made it objectionable as a route for the transport of grain to the northern cities, or, as it was thought, to Europe. The steamboat had done much for the Valley, but it had its limits of usefulness. These difficulties might possibly be put up with if development were to be arrested, or to proceed with a more measured step; but the rate of development had been acquired and it must proceed with ever-increasing rapidity.

The means of overcoming this difficulty had been foreseen for twenty years; a new application of steam had begun to aid in solving the problem. By 1830 the success of railways in the East was fairly assured. Their progress was attentively observed from the West, and it was very soon decided that this was the special instrument needed for the development of the upper Valley. The interiors of the prairie states and territories were unprofitable for settlement from the inadequate supply of lumber, the expense of reaching markets and the low price of agricultural products. By the winter of 1835–6 the great progress made in ten years and the general prosperity of the country led the people of the West to feel that nothing was impossible to them. They proposed to cover the prairies with railroads and do precisely that which has been done in later years. The courage, the self-reliance, the sense of power, which had brought them successfully through the Heroic Period, through the immense difficulties of the following twenty-five years, and had then developed the internal commerce of the country to such vast proportions, by the steamboat, filled them with buoyant exultation. They had surmounted formidable difficulties with a pertinacious energy that certainly gave them the right to feel proudly confident.

Western Legislatures seemed to fully comprehend the meaning of the railroad; they saw at once that the results would be what they have since become. Young America, in this region of boundless opportunities, showed a quickness of apprehension and a courage of endeavor equal to the occasion. At this time (1836) the Legislature of Illinois incorporated companies for building railroads whose contemplated length was *three thousand, two hundred and eighty-seven miles.* The Legislature of Missouri incorporated one and contemplated another. Such was the spirited feeling of the men of the West! But they had not counted the cost, had not yet bargained with capital, nor taken possible disasters into the account. The country had been growing prosperous beyond any similar experience of mankind; grave business men and statesmen lost their mental equilibrium with the sight of a growth so rapid, and, evidently, so solid; the national debt was extinguished except a few hundred thousand dollars, which could not be paid, though it might have been done ten times over with funds at hand; with a large surplus income it determined to lend to the states, and the West felt itself thoroughly prosperous.

With such fair prospects everybody made haste to be rich, and credit was almost unlimited ; the future was judged by the immediate past, and its growth freely pledged for loans that were expected to multiply results indefinitely. But they now received a sad lesson on the evils of over-confidence and over-haste. Credit had gone too far and assumed too much. An attempt to rectify itself resulted in panic and a hasty attempt of lenders to recover from creditors; this could not be done at once nor at all without the expected help of the future. A sudden fall of values was the result. This created great distress, especially in the Valley, where so much had been invested which could not make returns for years. Railroad projects were therefore mostly abandoned until better times and the people of the Valley set themselves to the work of repairing the injuries of the storm of disaster. The few railways that went on proceeded very slowly. Young America must learn to be patient as well as courageous.

Railroads were steadily pressed forward in the East, however, so that, in 1850, there were 8,600 miles of road in use. Only a few hundred of these were in the Valley ; but those in the East, were, in many cases, lines, or parts of lines, built from the seaboard cities toward it. Some of them had reached its borders. Boston was joined to New York and that city with Lake Erie ; Chicago was connected with Detroit near Lake Erie; and the upper Ohio was about to be joined to Philadelphia and Baltimore by two routes. The East was as eager to tap the streams of wealth in the Valley, for its own benefit, as the West was to open larger channels for the outflow of its abundance for the sake of sale.

The difficulty was in a deficiency of capital. Hundreds of millions of dollars required to be withdrawn from immediately productive pursuits, large returns must be deferred for some years, and some uncertainty must be allowed in many of the ventures. In the earlier days this capital could not be at once spared. The beginnings already made had exhausted the accumulations seeking investment; there must be time for fresh accumulations. This point was suddenly gained by the discovery of gold in California. The amount was so large and continued to flow so long that capital at once became abundant, and by various channels found its way to investment in the railroad system of the Valley that had been so liberally projected fifteen years before. Some hundreds of millions of gold were supplied to the floating, or cash, capital of the country when it was most needed. The railroad system already united with steamboat navigation to connect the lakes and the upper Ohio with the northern Atlantic; now a new impulse was given to constuction ; the omissions in the chain were filled in; various roads soon crossed the Valley, extended down the rivers and along the lakes, to compete with the steamboat; the interiors were connected with the commercial centers, and any section it was desired to completely open up to settlement was supplied with a railroad.

The great destiny of the Northwest had already become apparent, but it had been embarrassed by the difficulties attending the settlement of an interior prairie region, by the ice and storms of winter, and by the difficulty of navigating the rivers during the low water of summer. Chicago now became a great railroad center as well as port for shipping; lines of railway radiated from it in all directions. In 1842 Illinois had but forty-two miles of railroad and in 1852 but one hundred and forty-eight; in 1860 it had 2,811, Wisconsin nearly 1,000, and the system had already begun to expand west of the Mississippi. Missouri had two lines, begun early in the decade. The great lumber regions of Wisconsin and Minnesota now furnished building material in cheap abundance, which was distributed where most needed—on the prairies—by the railroads.

The eager desire of the American people to acquire full possession of the great wealth the Valley offered them was now fully met by facilities equal to their need. The East poured its people west in a mighty flood. The peasants and artisans of Europe came by the hundred thousand, replacing the drain from the East as well as multiplying the emigrants to the West. There was a transfer of millions from the East to the West. It hardly bore the character of emigration, for the railroads often received considerable communities of friends and neighbors, with all their movable comforts and belongings, set them down together, on some vacant spot on the beautiful prairies, and, in a brief space, furnished them all the means of replacing their abandoned homes by still more beautiful ones. In a year or two the farms had been fenced and tilled, the buildings put in order, the village artisans settled to their callings, the school and church supplied, and a mature, orderly and prosperous community was pursuing its quiet way as before in the East. "Going West" was no longer becoming pioneers, to suffer deprivation, to pass through years of struggle with difficulty before the comforts and advantages left could be replaced. With every facility for instantly surrounding themselves with all the conveniences of life, and entering immediately on the work of production, they had all the advantages of distant markets brought to their doors, and a considerable income could be immediately obtained.

It was a vast change, suddenly wrought, and the more suddenly that it was now chiefly the prairie that was sought. The accessible timbered regions had been settled before. With so much ease and convenience of replacing homes and incomes, the transfer from the East to the West was made in masses, and the gain of population in the Valley between 1850 and 1860 was quite as great as had been the whole number as late as the year 1838. Wisconsin had received about 470,000; Texas nearly 400,000; Tennessee and Kentucky had gained about 250,000; Ohio 260,000; Illinois more than 800,000; Indiana

320,000; Missouri 500,000; Iowa 480,000; Minnesota 166,000; Mississippi, Alabama and Louisiana about 190,000 each; Michigan 350,000; Arkansas 227,000; Kansas over 100,000, and Nebraska nearly 30,000. Some other gains raised the whole number considerably above 5,000,000. The center of population for the United States was already within the limits of the Valley, and every condition of a still greater growth and prosperity was abundantly supplied, had enterprise remained unchecked and chiefly confined east of the Rocky Mountains. Human affairs are so arranged that the spring and summer of a great prosperity are usually followed by a winter of great disaster. It so occurred at this time, though not without important compensations.

CHAPTER XII.

CONSTITUTIONAL BEGINNINGS BY THE EARLY SETTLERS.

The people of the colonies which furnished the pioneers of the Mississippi Valley were not all of one nationality by descent; they were from various classes of society in the Old World; and many of the principles that were to be afterward embodied in the institutions they created lay, in the earlier times, undeveloped in their minds. They were truly attached to the mother country, and the customs ruling in the ancient homes of their memories and affections were, so far as they were suitable, continued in their new surroundings. Yet, in spite of their loyalty to influences and bonds that reached across the Atlantic, they were all of the stock which had built up a vigorous, though turbulent, civilization on the splendid ruins of the Roman Empire it had overthrown, and their circumstances in the New World insensibly developed the stronger and nobler features of character which lay at the root of European history. They were of the races of the Feudal Knights of Chivalry and Romance, of the Crusaders, and of the Northmen—of the races that had covered Europe with battle-fields, that scarcely ever rested from fighting, and yet grew more thoughtful and wise from age to age.

Transplanted to America with chartered rights to defend against all attacks, with endless trials of fortitude and courage while subduing a wilderness and conquering the warlike Indians, the same resolute character that had kept Europe in tumult for fifteen hundred years was more and more drawn out. When they made a point they held to it; truly civilized, they felt the value of legal governments on which the security of property, the comfort of life, and the strength of the community against public enemies depend; they respected authority, endeavored to keep within legal limits in resisting its exactions, and argued and diplomatized with much patience for years; but what they had resolved authority should not force on them they resisted with unwavering constancy. All the colonies, differing much in many other things, were endowed with this sturdiness of character. There was a repressed fervor—held in check by prudence and habit—that consistently animated their lives as a whole. Not much remarked on ordinary occasions, it broke out with intensity at great crises. This fiery resoluteness lay partly in reserve for emergencies, and partly as a steady, stimulating force at the springs of action. It is the most useful and admirable contradiction in character any people can possess.

These elements of character crossed the mountains with the pioneers of the Valley and were still further developed there by a severe and peculiar discipline. The Indian dashed against them, as against a rock, and rebounded wounded and broken. The French, the Spanish and the English tried against them all their arts of war, of diplomacy, and of glittering promises, with the same result. While, few and unprotected, they were struggling to build homes and open farms in a vast ocean of forest in the far interior, and the colonies on the coast were confronting the navies and armies of England, they stood successfully at bay before the Indians, who, stimulated by British agents and furnished with British arms, sought to sweep them down by the bullet, the tomahawk and the firebrand. They not only stood firm; they knew how to strike back with great effect. They completely defeated the British Indian Policy in the Valley, and held the outposts of the new Republic against great odds—not as soldiers but as farmers. Their main business was agricultural; fighting was only undertaken when not to be avoided, or to secure relief from attack.

It was extremely fortunate that this people, intent only on industrial progress, secured possession of the richest and best agricultural region in the world instead of the Spanish, French or English. Under the control of a foreign government, which would have subordinated the interests of their subjects here to their European policy, and have deprived them of the freedom of action and the stimulus to enterprise necessary to great results, there would have been a repetition, more or less complete, of the history of Canada and the Spanish American colonies. Could the French habitans of Canada have developed as freely as the Anglo-Americans in the Valley, their history would have been prouder and more impressive. Under the policy pursued by France and Spain their colonists stagnated ; both character and enterprise lay dormant. Although England was considerably wiser than France or Spain her colonial policy remained a huge stumbling block to her colonies until within the last fifty years, and a part of her recent wisdom is due to the influence and example of free America.

One hundred and forty-four years after the death of De Soto, La Salle, representing the humane and courteous side of the old chivalry brightened with the morning rays of a new civilization and a riper age, fell a victim to Jesuit intrigue and the disappointed passions of his followers. Had he lived and prospered he would have held the lower and central Valley and a new France would have taken root in the prairies, and, in alliance with the Indians, have confined Anglo-American development to the Atlantic Slope for a long period, at least. The character of the Republic, could it have come into being so surrounded with adverse influences, must have been extremely different. More compact and concentrated, it would have been more European, its thought less free, its growth less expansive. The spirit of modern justice can not shed a tear over the tragic fate of the heart-broken De Soto. He embodied, for the Valley, the inhumanity of his country and times—it was fitting that an ambition so brutal and unholy should find a grave in the waters of the Mississippi. La Salle belonged to more modern times; he had much of our own appreciation of the beautiful Valley, and his ambition might easily have been gratified without the bloodshed and ruin which were essential to the success of Cortez and Pizarro.

The disastrous close of La Salle's career, in the full strength and power of a manhood so noble and on the eve of success, is painful to contemplate, for his character and aspirations awaken all our sympathy; but the success of his great plans would have widely and disastrously changed the history of the first century of the Republic, and the great wealth of the Valley would have nourished a sadly imperfect form of European civilization.

Thirteen years after the death of La Salle the Canadian, D'Iberville, established a French colony in the lower Valley; but it was not the time, nor was he the man, to realize the broad schemes of the great French pioneer. The French settlements on the feverish and unhealthy Gulf coast added but slightly to the strength and development of the germs La Salle had planted on the Illinois. The settlements there became simple trading posts; the settlers, having no stimulus and no vigorous head to think and plan for them, bowed before the difficulties of the situation and sunk, as nearly as their memories and previous habits would permit, toward the level of the Indian. The wilderness overwhelmed them. They did not settle like the Anglo-Saxon, work out a destiny of their own by developing the resources of the country, and hewing their way to the outside world. They took life easily, hunted, traveled, and cultivated a little; lived in a primitive simplicity, little above that of the Indians, without acquiring their vigorous passion for war. Falling, in the lower Valley, into hostile relations to the Chickasaws and Choctaws, as the early Canadians had done to the Iroquois, and maintaining closer relations with France, they preserved a stronger organization without developing a much higher or more aggressive character. French dominion in the Valley was, therefore, an element too feeble and uncertain to seriously affect its destinies. They served mainly to exclude a more vigorous intrusion until the true masters and civilizers of the Valley should appear. When they were confined, after the conquest of Canada, to the west bank of the river, the French inhabitants on the east bank lost little by retiring across it, for they left little but a memory.

The English constitution contained the germs of freedom, and those germs lay even more in the intelligence and character of the Anglo-Saxon people than in the policy or traditions of Government. Anglo-Americans remembered the principles which had often been forgotten by Kings, Lords, and even Commons, and proceeded to give them a broad and free interpretation. Yet progress even in this was slow; and constitutional beginnings were, at first, on the old English models. Soon after the close of Pontiac's war a "Mississippi Company" was formed in the colonies, and a petition, signed by George Washington, among other Virginia gentlemen, was presented to the English Board of Trade for two and a half million acres of land in "Ohio." The English Government did not look favorably on an extension of the settlements across the mountains. Franklin, then the agent of the colonies in England, wrote a paper on the "Ohio Settlements" which somewhat changed its views, and the concession asked received the signature of the king, August 14, 1772, while irregular settlement was forbidden by royal proclamation. The approach of the Revolutionary struggle prevented this scheme from ripening into act. "West Florida," as the shore of the Gulf east of the Mississippi River was called, had passed into the hands of the English Government in 1764, and emigration there was encouraged for commercial and military purposes; but the settlements did not then acquire any great strength. The coast was unhealthy, and the warlike Creeks held the upper regions.

In 1775 Richard Henderson and other gentlemen, residents of North Carolina, having formed the "Transylvania Company," purchased territory, in Kentucky and Tennessee, of the Cherokees, and founded the first settlements in Kentucky at Boonesborough and several other points in that region. The government was to be a mixed proprietary and popular one, on the plan of many of the colonies, as had probably been proposed by the "Mississippi Company." On the 23d of May, 1775, having laid the first foundations of four settlements, the proprietors met representatives from each of them in the yet unfinished fort at Boonesborough, to legislate for the common interest. The proprietors prepared a document answering to a Constitution and a Bill of Rights, and the House of Delegates, as the representatives called themselves, with all due formalities, prepared such a code of laws as was deemed necessary for the present, which was signed by the proprietors. This proprietary scheme fell through because Virginia claimed the territory west of the mountains to the Mississippi River, refused to recognize the treaty of cession made to the Company by the Cherokees, and deprived them of a valid title to the lands. Proprietary governments were, really, a relic of the past. Several attempts were afterwards made to introduce them into the Valley, under various modifications, but they did not suit the rising genius of the new nation. Many complications and vexations in regard to titles soon banished them altogether, while the self-reliance enforced by the dangers and difficulties of the wilderness soon taught the poorer settlers that dependence on proprietors was a hindrance and not a help.

The misgovernment of royal officers and the high spirit of the backwoodsmen of North and South Carolina led to the establishment, between 1760 and 1770, of considerable settlements within the border of the Valley, on the Holston and Watauga Rivers, near where the boundaries of Virginia, North Carolina and Tennessee now meet. Though beyond the recognized boundaries of civilization, they did not propose to cease to be civilized, and, in 1772, feeling the need of some form of government, with true American instinct, they drew up "Articles of Association" and established a small provisional republic. Rules, or laws, for the government of their common interests were adopted and commissioners appointed by popular vote to see them properly executed. Settlers from Pennsylvania wandered down the Shenandoah Valley and the settlement soon spread over into what is now Tennessee. For several years these Articles of Association formed the only constitution and law of the settlements. The executive tribunal appointed under it held sessions at regular intervals. It had a clerk, an attorney, and appointed a sheriff. The laws of Virginia were adopted as the standard by which its decisions were rendered. When, in 1776, the decisive conflict of the colonies with the Mother Country had overthrown the royal government, from whose injustice they had withdrawn to the wilderness, the Watauga settlers within the boundaries of Tennessee petitioned to be annexed to North Carolina. The Legislature of that state organized a district embracing the whole of what became the State of Tennessee, which these ardent backwoods republicans called Washington, in honor of the great patriot whose recent success in driving a British army from Boston filled them with joy.

In the following year it became a county, with courts, sheriffs and justices of the peace. Virginia made similar provision for Kentucky at the same time. Both counties at once elected deputies to represent them in the Legislatures of their respective states. A constant stream of pioneers increased these two settlements to many thousands before the close of the war, and several other counties had then been formed. They were, nominally, integral parts of Virginia and North Carolina.

Really, they suffered the inconveniences of that relation without its advantages. The British, as a war measure, sought to attack the colonies in the rear by forming alliances with the Indians, furnishing them with military supplies and stirring up their hostility to the settlers. Holding the posts of the French pioneers, from Detroit to the Mississippi River and along the Gulf, they drew a cordon of fire around the rebels, from the Hudson to the Ohio and from Kentucky to Georgia.

The East had its hands full and could give little aid to the West. In January, 1778, Patrick Henry, governor of Virginia, commissioned George Rogers Clarke, at his own urgent request, to raise a force for the conquest of the British posts in "The Illinois Country," and, calling for volunteers along the frontier, he fell like a thunderbolt on the distant post of Kaskaskia, and took possession of it by surprise, July 4th, of that year, and contrived, by his admirable daring and strategy, to maintain the general superiority of the American arms over the British and Indians in that vast wilderness during the rest of the war. The Tennesseeans were equally successful in thwarting English agents among the Cherokees and Creeks, and, furnishing a contingent to the patriot forces in the Carolinas, assisted in gaining some of the brilliant victories that preceded the fall of Cornwallis.

But the Indians, though usually defeated, continually returned to the attack. The settlers, without any permanent military force to protect their quiet progress, were required to be ready at any and every moment to lay down the axe and the hoe and take up the rifle. Property and life were in constant peril. Indian hostility did not cease when the independence of the country was secured; the General Government had but the shadow of power, and state governments were absorbed in repairing their own disasters. England still held possession of Detroit and the Upper Lakes, and hoped yet to recover her lost colonies; while Spain held possession of the mouth of the Mississippi. The settlements were increased by many thousands yearly, but these were largely women and children who must be supported by such resources as the

Valley itself supplied, and the more they increased the more abundant were the opportunities of the Indians to glut their vengeance by slaughter and booty.

Thus the formation of an efficient local government became an absorbing interest, and immediately after the close of the war Kentucky and Tennessee began to agitate constitutional questions. It had become evident that the state governments east of the mountains could not perform their functions successfully in the West; the need of stronger organization there was imperative, and yet the embarrassing dependence could not easily be shaken off until a definite plan was agreed upon. Kentucky agitated, negotiated and waited. Tennessee remonstrated without effect, and acted by organizing the "State of Franklin."

Both Virginia and North Carolina took steps between 1780 and 1784, looking to the cession of the territories they claimed in the West to the Continental Government. That government was overwhelmed with debt, and well nigh helpless for good. It inspired little confidence or respect, and the reluctance of the states to grant it larger powers did not promise further help from it to the bleeding settlements in the Valley.

The idea was then prevalent that the difficulties of communication between the East and the West across the mountains could not be overcome, and projects of entire independence of the East were frequently suggested to the leading settlers by intriguers in the interest of foreign governments, by the ambitious who found in them promises of personal advancement, and, perhaps, also, by their own reflections on the various embarrassments of the situation. The bold, decisive and enterprising spirit which the necessities of the times cultivated in them would, in any other race, have led to unhappy consequences; but their caution and good sense were equal to their valor. Kentucky held convention after convention to mature plans, to ascertain the views of the masses of the people, and to negotiate with Virginia, the Mother State. Though anxious, and sometimes indignant, at the slow and uncertain movements of the Eastern people who dwelt in security, while the tomahawk and the firebrand were laying waste their infant settlements, they would no nothing illegal. They added patience to their other virtues, and waited nearly *ten years* for liberty to construct the organization they so much needed.

If Tennessee acted promptly she was no less ready to correct the error when it was clearly recognized. The fierce Cherokees and Creeks were immediate neighbors, and the Tennesseeans were exposed to even greater dangers than the Kentuckians, whose enemies were scattered at long distances north of the Ohio. Two conventions, in 1784, organized their independent State of Franklin, and its first Legislature assembled early in 1785. The constitution was completely republican, according to the American idea of that time. The legislative authority was confided to a single House of Representatives; the executive consisted of a Governor and Council, all elected by vote of the citizens. All white people could purchase lands on taking the oath of allegiance to the state, and become citizens after one year's residence.

North Carolina had made a conditional cession of Tennessee to the General Government, but it had not yet taken effect. Its Legislature highly disapproved the measures of the Tennesseeans, immediately revoked the cession, reclaimed the allegiance of the Franklinites and sought to remove all the causes of discontent that had led to the organization of the independent state. With great prudence and moderation it abstained from harsh measures, but ordered elections and appointed officers as formerly. The Franklin Government had gone into operation and continued to perform its functions for three years; but the citizens gradually fell away from it and recognized North Carolina officers and laws, and the unusual spectacle was seen of two state governments acting quietly, with almost no collision, in the same community. The people came gradually to believe that they had no sufficient reason for revolutionary measures, and, in 1798, the Franklin Government died a natural death. As soon as the United States Government, under the new Constitution, went into operation both Kentucky and Tennessee were ceded to it. Kentucky was waiting to be received into the Union as a state and never received a formal territorial organization. Its county organizations and courts, as constituted by Virginia, took care of public order until its admission into the Union, June 1, 1792.

Tennessee was organized under an Ordinance of Congress, which adopted all the features of that of 1787 for the Northwest Territory, except in regard to slavery, which had been introduced under the laws of North Carolina and remained undisturbed. Thus, by their wisdom, moderation and patience under the severest temptations to independent action, the simple and true common-sense of the pioneers of the Valley forbore to add to the difficulties which beset the Republic at the close of the war, and, though suffering greatly, bided their time for receiving justice and relief. They showed, in these early days, before the new nation had organized its strength, the healthy, practical instincts that have saved the Republic in all its perilous crises, and which are the real source of its greatness.

CHAPTER XIII.

THE CONSTITUTIONAL SYSTEM FOR CREATING NEW STATES.

While Tennessee was beginning to revise her hasty action in disregarding her eastern relations, and Kentucky was showing herself worthy of independence by her respect for constitutional restraints, the statesmen of the East were doing themselves equal honor in providing for the future welfare of the parts of the country not included in the organized states. July 13, 1787, the Continental Congress perfected an Ordinance for the government of the territory lying between the Ohio and Mississippi Rivers and the Great Lakes.

This instrument defined the character of a Territory, as distinguished in its government from that of a State, and settled the general practice subsequently followed. Some of its provisions formed part of a political compromise between the free and slave states of great importance, and it is here given in full. It is called

THE ORDINANCE OF 1787.

An Ordinance for the Government of the Territory of the United States Northwest of the River Ohio.

Be it ordained by the United States in Congress assembled, That the said territory, for the purposes of temporary government, be one district, subject, however, to be divided into two districts, as future circumstances may, in the opinion of Congress, make it expedient.

Be it ordained by the authority aforesaid, That the estates, both of resident, and non-resident proprietors in said territory, dying intestate, shall descend to, and be distributed among, their children, and the descendants of a deceased child, in equal parts; the descendants of a deceased child, or grandchild, to take the share of their deceased parent in equal parts among them: And where there shall be no children or descendants, then in equal parts to the next of kin in equal degree; and, among collaterals, the children of a deceased brother or sister of the intestate shall have, in equal parts among them, their deceased parent's share; and there shall, in no case, be a distinction between kindred of the whole and half-blood; saving, in all cases, to the widow of the intestate, her third part of the real estate for life, and one third part of the personal estate; and this law, relative to descents and dower, shall remain in full force until altered by the Legislature of the district. And, until the Governor and Judges shall adopt laws as hereinafter mentioned, estates in the said Territory may be devised or bequeathed by wills in writing, signed and sealed by him or her, in whom the estate may be (being of full age), and attested by three witnesses: and real estates may be conveyed by lease and release, or bargain and sale, signed, sealed, and delivered, by the person, being of full age, in whom the estate may be, and attested by two witnesses, provided such wills be duly proved, and such conveyances be acknowledged, or the execution thereof duly proved, and be recorded within one year after proper magistrates, courts, and registers; shall be appointed for that purpose; and personal property may be transferred by delivery; saving, however, to the French and Canadian inhabitants, and other settlers of the Kaskaskias, St. Vincents, and the neighboring villages who have heretofore professed themselves citizens of Virginia, their laws and customs now in force among them, relative to the descent and conveyance of property.

Be it ordained by the authority aforesaid, That there shall be appointed, from time to time, by Congress, a Governor, whose commission shall continue in force for three years, unless sooner revoked by Congress; he shall reside in the district, and have a freehold estate therein in 1,000 acres of land, while in the exercise of his office.

There shall be appointed, from time to time, by Congress, a Secretary, whose commission shall continue in force for four years, unless sooner revoked; he shall reside in the district, and have a freehold estate therein in 500 acres of land, while in the exercise of his office; it shall be his duty to keep and preserve the acts and laws passed by the Legislature, and the public records of the district, and proceedings of the Governor in his Executive department: and transmit authentic copies of such acts and proceedings, every six months, to the Secretary of Congress: There shall also be appointed a Court to consist of three Judges, any two of whom to form a court, who shall have a common law of jurisdiction, and reside in the district, and have each therein a freehold estate in 500 acres of land, while in the exercise of their offices; and their commissions shall continue in force during good behavior.

The Governor and Judges, or a majority of them, shall adopt and publish in the district such laws of the original States, criminal and civil, as may be necessary, and best suited to the circumstances of the district, and report them to Congress from time to time; which laws shall be in force in the district until the organization of the General Assembly therein, unless disapproved of by Congress; but, afterwards, the Legislature shall have authority to alter them as they shall think fit.

The Governor for the time being shall be commander-in-chief of the militia, appoint and commission all officers in the same below the rank of general officers ; all general officers shall be appointed and commissioned by Congress.

Previous to the organization of the General Assembly, the Governor shall appoint such magistrates, and other civil officers, in each county or township, as he shall find necessary for the preservation of the peace and good order in the same; After the General Assembly shall be organized, the powers and duties of magistrates and other civil officers, shall be regulated and defined by the said Assembly; but all magistrates and other civil officers, not herein otherwise directed, shall, during the continuance of this temporary government, be appointed by the Governor.

For the prevention of crimes and injuries, the laws to be adopted or made shall have force in all parts of the district, and for the execution of process, criminal and civil, the Governor shall make proper divisions thereof; and he shall proceed, from time to time, as circumstances may require, to lay out the parts of the district in which the Indian titles shall have been extinguished, into counties and townships, subject, however, to such alterations as may thereafter be made by the Legislature.

So soon as there shall be 5,000 free male inhabitants of full age in the district, upon giving proof thereof to the Governor, they shall receive authority, with time and place, to elect Representatives from their counties or townships to represent them in the General Assembly: *Provided*, That, for every 500 free male inhabitants, there shall be one Representative, and so on progressively with the number of free male inhabitants, shall the right of representation increase, until the number of Representatives shall amount to twenty-five; after which, the number and proportion of Representatives shall be regulated by the Legislature: *Provided*, That no person be eligible or qualified to act as a Representative unless he shall have been a citizen of one of the United States three years, and be a resident in the district, or unless he shall have resided in the district three years; and, in either case, shall likewise hold in his own right, in fee simple, two hundred acres of land within the same: *Provided, also*, That a freehold in fifty acres of land in the district, having been a citizen of one of the States, and being resident in the district, or the like freehold and two years' residence in the district, shall be necessary to qualify a man as an elector of a Representative.

The Representatives thus elected, shall serve for the term of two years: and, in case of the death of a Representative, or removal from office, the Governor shall issue a writ to the county or township for which he was a member, to elect another in his stead, to serve for the residue of the term.

The General Assembly, or Legislature, shall consist of the Governor, Legislative Council, and a House of Representatives. The Legislative Council shall consist of five members, to continue in office five years, unless sooner removed by Congress; any three of whom to be a quorum: and the members of the Council shall be nominated and appointed in the following manner, to wit: As soon as Representatives shall be elected, the Governor shall appoint a time and place for them to meet together; and when met they shall nominate ten persons, residents in the district, and each possessed of a freehold in five hundred acres of land, and return their names to Congress; five of whom Congress shall appoint and commission to serve as aforesaid; and, whenever a vacancy shall happen in the Council, by death or removal from office, the House of Representatives shall nominate two persons, qualified as aforesaid, for each vacancy, and return their names to Congress; one of whom Congress shall appoint and commission for the residue of the term. And every five years, four months at least before the expiration of the time of service of the members of the Council, the said House shall nominate ten persons, qualified as aforesaid, and return their names to Congress; five of whom Congress shall appoint and commission to serve as members of the Council five years, unless sooner removed. And the Governor, Legislative Council, and House of Representatives, shall have authority to make laws in all cases, for the good government of the district, not repugnant to the principles and articles in this ordinance established and declared. And all bills, having passed by a majority in the House, and by a majority in the Council, shall be referred to the Governor for his assent; but no bill, or legislative act whatever, shall be of any force without his assent. The Governor shall have power to convene, prorogue, and dissolve the General Assembly, when, in his opinion, it shall be expedient.

The Governor, Judges, Legislative Council, Secretary, and such other officers as Congress shall appoint in the district, shall take an oath of affirmation of fidelity and of office; the Governor before the President of Congress, and all other officers before the Governor. As soon as a Legislature shall be formed in the district, the Council and House assembled in one room, shall have authority, by joint ballot, to elect a Delegate to Congress, who shall have a seat in Congress, with a right of debating, but not of voting, during this temporary government.

And, for extending the fundamental principles of civil and religious liberty, which form the basis whereon these republics, their laws and constitutions are erected; to fix and establish those principles as the basis of all laws, constitutions, and governments, which forever hereafter shall be formed in the said territory; to provide also for the establishment of States, and permanent government therein, and for their admission to a share in the Federal Councils on an equal footing with the original States, at as early periods as may be consistent with the general interest:

It is hereby ordained and declared by the authority aforesaid, That the following articles shall be considered as articles of compact between the original States and the people and States in the said Territory, and forever remain unalterable, unless by common consent, to wit:

Art. I. No person, demeaning himself in a peaceable and orderly manner, shall ever be molested on account of his mode of worship or religious sentiments, in the said Territory.

Art. II. The inhabitants of the said Territory shall always be entitled to the benefits of the writ of *habeas corpus*, and of the trial by jury, of a proportionate representation of the people in the Legislature; and of judicial proceedings according to the course of common law. All persons shall be bailable, unless for capital offenses, where the proof shall be evident or the presumption great. All fines shall be moderate; and no cruel or unusual punishments shall be inflicted. No man shall be deprived of his liberty or property, but by the judgment of his peers or the law of the land; and, should the public exigencies make it necessary, for the common preservation, to take any person's property, or to demand his particular services, full compensation shall be made for the same. And, in the just preservation of rights and property, it is understood and declared, that no law ought ever to be made, or have force in the said territory, that shall, in any manner whatever, interfere with or affect private contracts or engagements, *bona fide*, and without fraud, previously formed.

Art. III. Religion, morality and knowledge, being necessary to good government and the happiness of mankind, schools and the means of education shall forever be encouraged. The utmost good faith shall always be observed towards the Indians; their lands and property shall never be taken from them without their consent; and, in their property, rights and liberty, they shall never be invaded or disturbed, unless in just and lawful wars authorized by Congress; but laws founded in justice and humanity, shall, from time to time, be made for preventing wrongs being done to them, and for preserving peace and friendship with them.

Art. IV. The said Territory, and States which may be formed therein, shall forever remain a part of this Confederacy of the United States of America, subject to the Articles of Confederation, and to such alterations therein as shall be constitutionally made; and to all the acts and ordinances of the United States in Congress assembled, conformable thereto. The inhabitants and settlers in the said Territory shall be subject to pay a part of the federal debts contracted, or to be contracted, and a proportional part of the expenses of government, to be apportioned on them by Congress according to the same common rule and measure by which apportionments thereof shall be made on the other states; and the taxes, for paying their proportion, shall be laid and levied by the authority and direction of the Legislatures of the district or districts, or new States, as in the original States, within the time agreed upon by the United States in Congress assembled. The Legislatures of those districts or new States shall never interfere with the primary disposal of the soil by the United States in Congress assembled, nor with any regulations Congress may find necessary for securing the title in such soil to the *bona fide* purchasers.* No tax shall be imposed on lands the property of the United States; and, in no case, shall non-resident proprietors be taxed higher than residents. The navigable waters leading into the Mississippi and St. Lawrence, and the carrying places between the same, shall be common highways, and forever free, as well to the inhabitants of the said Territory as to the citizens of the United States, and those of any other States that may be admitted into the Confederacy, without any tax, impost or duty, therefor.

ART. V. There shall be formed in the said Territory, not less than three nor more than five States; and the boundaries of the States, as soon as Virginia shall alter her act of cession, and consent to the same, shall become fixed and established as follows, to wit: The western State in the said Territory, shall be bounded by the Mississippi, the Ohio and Wabash Rivers; a direct line drawn from the Wabash and Post St. Vincent's due north, to the territorial line between the United States and Canada; and, by the said territorial line to the Lake of the Woods and Mississippi. The middle State shall be bounded by the said direct line, the Wabash from Post St. Vincent's to the Ohio, by the Ohio, by a direct line drawn due north from the mouth of the Great Miami, to the said territorial line. The eastern State shall be bounded by the last mentioned direct line, the Ohio, Pennsylvania, and the said territorial line: *Provided, however*, and it is further understood and declared, that the boundaries of these three States shall be subject so far to be altered, that if Congress shall hereafter find it expedient, they shall have authority to form one or two States in that part of the said territory which lies north of an east and west line drawn through the southerly bend or extreme of Lake Michigan. And, whenever any of the said States shall have 60,000 free inhabitants therein, such State shall be admitted, by its delegates, into the Congress of the United States on an equal footing with the original States in all respects whatever, and shall be at liberty to form a permanent Constitution and State Government: *Provided*, the constitution and government so to be formed, shall be republican, and in conformity to the principles contained in these articles; and so far as it can be consistent with the general interest of the confederacy, such admission shall be allowed at an earlier period, and when there may be a less number of free inhabitants in the state than sixty thousand.

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*Act of 25th February, 1811, provides the same in Louisiana; and, also, that lands sold by Congress shall not be taxed for five years after sale—in Mississippi, by act of 1st March, 1817, and so of all others.

Art. VI. There shall be neither slavery nor involuntary servitude in the said Territory, otherwise than in the punishment of crimes, whereof the party shall have been duly convicted: *Provided, always*, That any person escaping into the same, from whom labor or service is lawfully claimed in any one of the original States, such fugitive may be lawfully reclaimed and conveyed to the person claiming his or her labor or service as aforesaid.

This ordinance was an instrument of great significance. It defined, simply and clearly, the relations of the territory not organized into sovereign states to the rest of the country. As this territory was held to be the common property of all the states, their common liberties were introduced into it. No citizen of any state could feel himself deprived of any general rights by removal to it. Provision was made for as vigorous a government from the first, under the oversight of the National Legislature, as the scattered condition of the settlers permitted for the election of a Territorial Legislature as soon as the free male inhabitants of legal age numbered 5,000; and for the formation of States in the new Territory, and their admission into the Union, on an equal footing with the original States, as soon as a moderately numerous population flowed in. It defined the future and cheered the settlers with the assurance of care, protection and ultimate equality with other sections and local independence, setting at rest the questionings and strivings that had so long disturbed Kentucky and Tennessee.

It was, virtually, a territorial constitution. Although, in form and origin but a law of Congress, and subject to repeal and alteration by the same, or any subsequent, Congress, it laid down principles so just and wise as to be accepted by future legislators as an authoritative precedent, and presided, thenceforth, over the destinies of all the common possessions of the Union and the preliminary organization of more than twenty states. It illustrates the admirable quality of the Anglo-Saxon mind, which plants itself on principles rather than forms, but which, having found a suitable form for the expression of an important principle, steadfastly respects that form so long as it does not interfere with growth. The English Constitution is quite made up of such precedents, and the real Constitution of the United States is by no means wholly contained in the written instrument bearing that name.

The Ordinance of 1787 rested, in one point, on a compromise such as has rarely been seen but among people of Anglo-Saxon descent, whose good sense, moderation, and bargaining instincts have often enabled them to avoid dangerous conflicts, and even sometimes to draw additional security and strength from what seemed elements of certain ruin. The introduction of slavery into Virginia, in 1620, proved fruitful of dangers and disasters to American liberty. Moral, social and industrial antagonisms gradually sprung out of it and threatened the peace and stability of the Union from its beginning. The instinctive foresight of danger, the causes of which they could not agree to banish altogether, led them to compare interests and views and ascertain what settlement of them was possible. Collision, apparently, would be fatal; union was indispensable; therefore they made terms with each other, giving the territory north of the Ohio to the free labor system, and that south of the Ohio to the forced labor system. Compromises are often but a temporary settlement of disputes, since something is sacrificed on either side for the sake of harmony. If the principles, or interests, sacrificed continue to diverge instead of melting into each other, with the progress of time, the compromise not only fails but renders future settlement more difficult; the idea of unfaithfulness to the terms of the original compact embittering one or both parties.

This difficulty subsequently rose into very formidable proportions on the slavery question; but the situation immediately after the Revolution seemed too critical to allow a violent contest, and neither the principles nor the interests involved were sufficiently well developed at that time to impress those great men with the danger which a compromise might involve. Other dangers seemed to them more immediate, and the truce between the two systems of morality, of social life, and of labor adjourned conflict and permitted the country to grow strong and learn its own mind more fully before undertaking a final solution of the problem. The conflict necessarily grew more violent as principles became more sharply defined, as interests diverged, and the strength of the parties increased. No permanent compromise finally proved possible and the shock was fearful; but the development of strength had not been equal and the free section passed through it with ease, coming out seemingly stronger than ever.

Each period of national history has its own measure of wisdom and foresight, its special questions to settle, and its instinct of self-preservation. The compromises involved in the Ordinance of 1787 and in the Constitution of the United States, elaborated a little later in that year, may be accepted, when all the circumstances and difficulties of that period are weighed, as a proof of the patriotic wisdom and moderation of the Fathers of the Republic. They deferred a dangerous quarrel until the country could give it all its attention. Other questions involving the existence of the State required all their thoughts and energies.

In July, 1788, the Ordinance went into operation in the Northwest Territory. For six years Indian wars retarded settlement; but, ten years after the foundations of the first town north of the Ohio were laid at the mouth of the Muskingum, the Territory was found to have 5,000 free male inhabitants over 21 years of age, and the people assumed the duty of legislating for themselves. Four years later still, the State of Ohio took her place in the Union. The Territories of Indiana, Illinois, Michigan and Wisconsin were successively formed under the Ordinance, as population extended into them, and in due time achieved the dignity of States; but the Territories so fully managed their own affairs, that, in most respects, the change of political status affected the interests of the people but slightly.

The Ordinance which became a virtual constitution for the territories, and the Constitution of the United States as subsequently adopted, were both produced in the summer of 1787. The first was almost the last important legislation done by the old "Continental Congress." It was the result of tolerably calm and deliberate discussion, no serious difficulties interfering to prevent its becoming a satisfactory expression of the convictions of its framers. The Constitution, on the contrary, was agreed upon in the convention with difficulty, and gave complete satisfaction to few or none of its makers. It was largely a compromise between conflicting views and interests, and narrowly escaped rejection by the States when submitted to them. But the institutions it organized and the jealous care for justice and equal liberty among all classes and sections—with the exception of the colored race—proved equal to the necessities of the case. It was a true and great success.

The idea of an organic, and not merely a federal, unity was conveyed by its preamble. "We, the *people* of the United States, in order to form a more perfect union, establish justice, insure domestic tranquility, provide for the common defense, promote the general welfare, and secure the blessings of liberty to ourselves and our posterity, do ordain and establish this CONSTITUTION for the United States of America."

Only time and circumstances could build up a true sentiment of national unity; but, though the form and expressions of the Constitution are a proof of the sagacity of it framers, it may be doubted if this point would have been gained but for the Valley and its wonderful growth, the broader and more national feeling which sprung up in the new interior states, and the vast interior commerce which produced a close community of interests.

The relations established by the Constitution between the central government and the states, and which exercised a general control over their constitutional history and form of government, are seen in the following extracts from it. The supremacy of the Constitution and laws of the United States over those of the States is affirmed by Article VI., Section 2, as follows:

> "This Constitution, and the laws of the United States which shall be made in pursuance thereof, and all treaties made, or which shall be made, under the authority of the United States, shall be the Supreme Law of the land, and the Judges in every State shall be bound thereby, anything in the Constitution or laws of any State to the contrary notwithstanding."

Certain valuable guarantees are given to the States by the Constitution of the United States. Article IV., Section 4, secures them a republican form of government:

> "The United States shall guarantee to every State in this Union, a republican form of government; and shall protect each of them against invasion, and on application of the Legislature, or of the executive (when the Legislature can not be convened) against domestic violence."

Article IV., Section 3, provides for the admission of new states and the control of the public territory and property without prejudice to the interests of the state.

"New states may be admitted by Congress into this Union; but no new state shall be formed or erected within the jurisdiction of any other state, nor any state formed by the junction of two or more states, or parts of states, without the consent of the Legislatures of the states concerned as well as of Congress.

Congress shall have power to dispose of, and make all needful rules and regulations respecting the territory, or other property belonging to the United States; and nothing in this Constitution shall be so construed as to prejudice any claims of the United States or of any particular state."

Each state is to be duly respected by all the others by Article IV., Section 1.

"Full faith and credit shall be given, in each state, to the public acts, records and judicial proceedings of every other state. And the Congress may, by general laws, prescribe the manner in which such acts, records and proceedings shall be proved, and the effect thereof."

By Article I., Section 9, they are secured uniform privileges and a free inter-state commerce.

"No tax or duty shall be laid on articles exported from any state. No preference shall be given by any regulation of commerce or revenue to the ports of one state over those of another; nor shall vessels bound to or from one state be obliged to enter, clear, or pay duties in another."

By Article IV., Section 2, fugitives from justice or labor in one state are to be returned by the others on due legal process.

"A person charged in any state with treason, felony, or other crime, who shall flee from justice and be found in another state, shall, on demand of the executive authority of the state from which he fled, be delivered up, to be removed to the state having jurisdiction of the crime.

No person held to service or labor in one state, under the laws thereof, escaping into another, shall, in consequence of any law or regulation therein, be discharged from such service or labor; but shall be delivered up on claim of the party to whom such service or labor may be due."

Article IV, Section 2, gives a guaranty to the citizens of each state, and the ten first Amendments secure many valuable personal rights.

"The citizens of each state shall be entitled to all the privileges and immunities of citizens in the several states."

"ARTICLE I. Congress shall make no law respecting an establishment of religion or prohibiting the free exercise thereof; or abridging the freedom of speech or of the press; or the right of the people peaceably to assemble, and to petition the government for a redress of grievances.

ART. II. A well regulated militia being necessary to the security of a free state, the right of the people to keep and bear arms shall not be infringed.

ART. III. No soldier shall, in time of peace, be quartered in any house without the consent of the owner, nor in a time of war, but in a manner to be prescribed by law.

ART. IV. The right of the people to be secure in their persons, houses, papers and effects, against unreasonable searches and seizures, shall not be violated; and no warrant shall issue, but upon probable cause, supported by oath or affirmation, and particularly describing the place to be searched and the person or things to be seized.

ART. V. No person shall be held to answer for a capital or otherwise infamous crime, unless on a presentment or indictment of a grand jury, except in cases arising in the land or naval forces, or in the militia when in actual service, in time of war or public danger; nor shall any person be subject, for the same offense, to be twice put in jeopardy of life or limb, nor shall be compelled, in any criminal case, to be a witness against himself; nor be deprived of life, liberty or property, without due process of law; nor shall private property be taken for public use, without just compensation.

ART. VI. In all criminal prosecutions, the accused shall enjoy the right to a speedy and public trial, by an impartial jury of the state and district wherein the crime shall have been committed, which district shall have been previously ascertained by law, and to be informed of the nature and cause of the accusation; to be confronted with the witnesses against him; to have compulsory process for obtaining witnesses in his favor, and to have the assistance of counsel for his defense.

ART. VII. In suits at common law, where the value in controversy shall exceed twenty dollars, the right of trial by jury shall be preserved, and no fact tried by a jury shall be otherwise re-examined in any court of the United States, than according to the rules of the common law.

ART. VIII. Excessive bails shall not be required, nor excessive fines imposed, nor cruel and unusual punishments inflicted.

ART. IX. The enumeration in the constitution, of certain rights, shall not be construed to deny or disparage others retained by the people.

ART. X. The powers not delegated to the United States, by the constitution, nor prohibited by it to the states, are reserved to the states respectively or to the people."

Article I, Sections 1 and 2, prohibits certain powers to the states which are of a sovereign nature.

"No state shall enter into any treaty, alliance, or confederation; grant letters of marque and reprisal; coin money; emit bills of credit; make anything but gold and silver coin a tender in payment of debts; pass any bill of attainder, *ex-post-facto* law, or law impairing the obligation of contracts; or grant any title of nobility.

No state shall, without the consent of Congress, lay any imports or duties on imports or exports, except what may be absolutely necessary for executing its inspection laws; and the net produce of all duties and imposts laid by any state on imports or exports shall be for the use of the treasury of the United States, and all such laws shall be subject to the revision and control of Congress. No state shall, without the consent of Congress, lay any duty on tonnage, keep troops or ships of war in time of peace, enter into any agreement or compact with another state, or with a foreign power, or engage in war, unless actually invaded, or in such imminent danger as will not admit of delay."

Article I, Section 8, determines the extent of the powers which, being granted to the National Legislature, are subtracted from the constitutional powers of the states:

"The Congress shall have power—

To lay and collect taxes, duties, imposts, and excises, to pay the debts and provide for the common defense and general welfare of the United States; but all duties, imposts and excises shall be uniform throughout the United States:

To borrow money on the credit of the United States:

To regulate commerce with foreign nations, and among the several states, and with the Indian tribes:

To establish a uniform rule of naturalization, and uniform laws on the subject of bankruptcies, throughout the United States:

To coin money; to regulate the value thereof, and of foreign coin; and fix the standard of weights and measures:

To provide for the punishment of counterfeiting the securities and current coin of the United States:

To establish post offices and post roads:

To promote the progress of science and useful arts, by securing for limited times, to authors and inventors, the exclusive right to their respective writings and discoveries:

To constitute tribunals inferior to the Supreme Court:

To define and punish piracies and felonies committed on the high seas, and offenses against the law of nations:

To declare war; grant letters of marque and reprisal; and make rules concerning captures on land and water:

To raise and support armies; but no appropriation of money to that use shall be for a longer term than two years:

To provide and maintain a navy:

To make rules for the government and regulation of the land and naval forces:

To provide for calling forth the militia to execute the laws of the Union, suppress insurrections, and repel invasions:

To provide for organizing, arming and disciplining the militia, and for governing such part of them as may be employed in the service of the United States; reserving to the States respectively, the appointment of the officers, and the authority of training the militia, according to the discipline prescribed by Congress:

To exercise exclusive legislation in all cases whatsoever, over such district (not exceeding ten miles square) as may, by cession of particular States, and the acceptance of Congress, become the Seat of the Government of the United States, and to exercise like authority over all places purchased by the consent of the Legislature of the State in which the same shall be, for the erection of forts, magazines, arsenals, dockyards, and other needful buildings: And,

To make all laws which shall be necessary and proper for carrying into execution the foregoing powers, and all other powers vested by this Constitution in the Government of the United States, or in any department or officer thereof."

The powers bestowed on the President of the United States are chiefly executive. He carries into effect the laws of Congress and wields the supreme power confided to the General Government; but he does not trench on the prerogatives of the states or of the people in any important point beyond those above mentioned.

The United States Judiciary is the legal judge of the meaning of, and powers conferred by, the Federal Constitution. No restrictions to the constitutional powers of the states and the people are, therefore, expressed or implied in the range of authority granted to the Executive and Judicial Departments of the General Government that are not involved in the grant made to the Legislative Branch and in the general regulations guarding the national authority. The states and the people have supreme power in all cases where it is not expressly taken from them. Federal Sovereignty is general, and expressly conveyed; State Sovereignty is local, and absolute where not expressly limited.

Congress determined the time when, and the conditions under which, the Territories might proceed to form a Constitution and organize a State Government; those conditions having been met, the Constitution adopted having provided a republican form of government, and containing no provisions conflicting with the Constitution of the United States, it became a Sovereign State in the American Union, equal in all respects to the original States. The Valley must needs be republican, and was guaranteed local self-government. Its general interests were naturally and necessarily identified, by its character and situation, with those of other sections of the country. Its loss of absolute sovereignty was more than compensated by sharing, through the United States citizenship of its people, representation in the Federal Congress, and free trade with other sections of the Union.

The theory of state and popular rights presented in the Constitution was liberally interpreted, at least through all the periods that have been under review. The thirteen states that had united in the Revolution had previously been independent of each other; they looked with suspicion on a strong central authority, and naturally maintained all the rights of the states. It was an acknowledged government of the people, and classes and sections could be favored only with the consent of the people themselves. The Valley was the domain of all the people, was principally settled by the citizens of the United States, and wholly ruled by them. It contained the sources of wealth and greatness for the eastern capitalist, manufacturer and trader as for the Republic itself; common treasures and interests were bound up in its prosperity, and it was constantly treated with a fairly wise liberality.

No irksome conditions were devised, no meddlesome interference was practiced, and an interpretation of the fundamental law more frank, just and kind could not easily have been imagined. When sectional difficulties found entrance they were not between the Valley and the East, but between labor systems and social habits which compromises had divided by Mason and Dixon's Line ; between free and slave states—North and South. Constitutionally, the Valley was dealt with most fairly and no people ever had a better opportunity to manage their own affairs at their own will.

CHAPTER XIV.

STATE CONSTITUTIONS.

The two first States organized in the Valley—Kentucky and Tennessee—having been largely settled while they remained parts of the States of Virginia and North Carolina, some of the forms of admission as of preliminary organization, which became customary afterward, were omitted. February 4, 1791, Congress consented to the admission of Kentucky June 1, 1792; while the Convention which framed its Constitution did not assemble until April 3, 1792, closing their labors the 19th of the same month. The Constitution was not submitted for approval either to Congress or to the people of Kentucky, but went into operation without opposition.

Representation was based on the free male inhabitants 21 years of age. The form of the government was, in general, what it continues to be after two revisals, and substantially the same as those afterwards adopted by all the new States. It followed, in many respects, the forms of the Constitution of the United States, dividing the government into three branches: Legislative, Executive and Judicial. The Legislature, called the General Assembly, consisted of a Senate and House of Representatives. The Governor and Senators were appointed by electors chosen by the people. Both of these held office for four years; the Representatives for one year. There was no Lieutenant-Governor, the President of the Senate acting as Governor in case of a vacancy. The Judges were elected by the people, but held office during good behavior.

In 1799 this Constitution was revised, giving the election of Governor and Senators directly to the people, and providing for a Lieutenant-Governor. In 1850 another revision was made which gave the Judges definite terms of office. Change has been in the direction of more complete popular control over lawmakers and officers.

Tennessee elected a Convention, which completed the preparation of a Constitution February 6, 1796, and soon after transmitted a copy of it to the President of the United States, with the notification that the Legislature would meet March 28, following, to act on the Constitution, and that the Territorial Government would then cease. These confident measures, taken without a previous Enabling Act of Congress, produced some opposition in that body, but the Bill admitting the State become a law June 1, 1796. The Senate, House of Representatives and Governor were elected every two years. The Legislature met every other year. There was no Lieutenant-Governor; the Governor could serve but six years out of eight ; and the Speaker of the Senate acted as Governor in case of a vacancy in that office. The Judges and State and District Attorneys were appointed by joint ballot of both Houses, and held their offices during good behavior. Ministers of the gospel and infidels were ineligible to civil office. Every freeman, who was a freeholder, 21 years of age, was a voter.

In 1835 an amended Constitution was ratified by the people. The principal changes related to the number of Representatives and Senators. In 1853 an amendment gave the election of the Judges to the people with a term of eight years, and a term of six years to State and District Attorneys. The general forms of the Constitution were like those of Kentucky. The same care for common school education was evinced. The new Constitution of 1835 made every free white citizen, resident six months in the county, a voter.

Slavery in these States had been inherited from Virginia and North Carolina. Some effort was made, in 1799, to secure its gradual abolition in Kentucky, but without effect. The first Constitution of Tennesssee did not mention slavery;

but the laws of North Carolina, which were adopted, sustained it.

Ohio, then called the Northwest Territory, was authorized by Act of Congress, April 30, 1802, to form a State Government. The Convention appointed for the purpose completed the first Constitution November 29, of the same year, which was approved by Congress February 19, 1803, and Ohio recognized as a State in the Union. The Governor and Senators were elected for two years, the Representatives for one year; the other State officers and judges were appointed by joint ballot of the General Assembly. The Governor must have been a citizen of the United States twelve years, resident in the State four years, and thirty years of age. The free use of the veto power by General St. Clair, while Governor of the territory, had given much dissatisfaction which led the framers of the Constitution to exclude the Governor from all connection with the enactment of laws. In most of the States the Governor's approval and signature were essential to the validity of a law. Only white male inhabitants 21 years of age, one year resident in the State, were legal voters. The sessions of the Legislature were annual. There was no Lieutenant-Governor, the Speaker of the Senate filling any vacancy occurring in that office.

A new Constitution was approved by the people in 1851. By this the sessions of the Legislature were made biennial, and the terms of the Representatives extended to two years. State officers and Judges were to be elected by the people, and the elective principle was made general. Eight Articles, relating to education and benevolent institutions, to the public debt and public works, to County and Township organizations and apportionment for election purposes, to a revision of the laws and the mode of amending the Constitution, as also the election of a Lieutenant-Governor, were added.

April 19, 1816, Congress passed an Enabling Act, authorizing Indiana to form a State Constitution, which instrument was completed by the Convention June 29, of that year, and Indiana was recognized as a State in the Union by joint resolution of Congress, December 11, following. The Constitution was not submitted to the people.

The sessions of the Legislature were annual, the Representatives elected for one year, the Senators, Governor and Lieutenant-Governor for three years. All white males twenty-one years of age, citizens of the United States, and resident in the State and County one year, were legal voters. The same qualifications were required in candidates for the House of Representatives. Senators must be twenty-five years of age, two years resident in the State and one in the county or district. The Governor and Lieutenant-Governor must have been citizens of the United States for ten years, five years resident in the State. The State officers were appointed by joint ballot of the two Houses of the Legislature; the Judges by the Governor and Senate, for seven years. The Governor was ineligible more than six years in nine.

In 1851 a new Constitution was adopted. It introduced the elective principle generally. The terms of Senators, Governor and Lieutenant-Governor were extended to four years; the terms of Judges were reduced to six years. Various changes were made in the wording, additions made to the Bill of Rights, and Articles inserted concerning State benevolent institutions, finance, forbidding immigration of colored persons into the State, and boundaries.

Louisiana was organized as a Territory of the First Class—that is, with a Legislature elected by its inhabitants—March 2, 1805, and called Orleans. February 20, 1811, it was authorized, by Act of Congress, to form a Constitution and State Government in conformity with the Constitution of the United States and with republican principles as understood by Americans. A Convention having framed a Constitution acceptable to Congress, it was submitted to, and approved by, the people of Louisiana, and it became a State in the Union, April 30, 1812. It was the first State formed in territory not belonging to the United States when the Constitution was adopted, and fear was expressed in Congress that its admission was unconstitutional and might lead to a dissolution of the Union; but the powerful principle of unity contributed by the Valley as a whole was much strengthened by the admission of a State controlling the mouth of the Mississippi.

This Constitution was, apparently, modeled on that adopted by Kentucky, in 1799, in its form and general provisions. The sessions of the Legislature were annual; the Senators and Governor were elected for four years, and the Representatives for two; Judges were appointed by the Governor and Senate during good behavior.

November 5, 1845, the people of Louisiana adopted a revised Constitution. Sessions of the Legislature were made biennial and some other changes were introduced. In 1852 a Convention again revised the Constitution, which was ratified by the people in the same year. Legislative sessions became annual again, the Judiciary and nearly all subordinate officers were made elective for the first time. A Board of Public Works was created and public schools were provided for more fully. Every free white male twenty-one years of age, who was a citizen of the United States, a resident of the State one year and of the parish six months, was made a voter, and also eligible to the House of Representatives and the Senate. A Representative served two years, a Senator four years. The Governor and Lieutenant-Governor must be twenty-eight years old and four years citizens and residents of the State. The Governor's term was four years, and he was ineligible for the succeeding term. In this State, as in several others in the Valley, civil officers were required to make oath that they had not sent or accepted a challenge to fight a duel, nor acted as seconds in one.

March 1, 1817, an Enabling Act of Congress authorized

Mississippi to form a State Government. Its Constitution was completed by the Convention August 15, approved by the people, and the State was admitted into the Union by joint resolution of Congress, December 10, of the same year. In 1832 the people ratified a new Constitution, which changed the sessions of the Legislature from annual to biennial, the terms of Representatives from one to two years, and Senators from three to four years; the form of the Judiciary was somewhat changed, and, from being, at first, appointed by joint vote of the two Houses of the General Assembly during good behavior, the Judges were elected by the people for a term of six years. A Chancellor was elected for six years, Judges of the Circuit Court for four years, and Justices of the Peace for two years. This is said to have been the first example among American Constitutions of making the Judiciary elective, but it soon became almost universal.

Every free white male 21 years of age, who was a citizen of the United States, resident one year in the State and four months in the place of voting, was made an elector or voter. Representatives must be 21 years old, have resided two years in the State and one year in the county or town; Senators must be 30 years old, have resided four years in the State and one in the district; and the Governor must be 30 years of age, have been a citizen of the United States 20 years and resident in the State five years. He was eligible only four years in six.

An Enabling Act of Congress permitted Alabama to form a State Government, March 2, 1819. A Constitution was completed by the Convention, ratified by the people, and the State admitted by joint resolution of Congress, December 14, 1819. This Constitution resembled that of Mississippi. Amendments were to be proposed by the General Assembly and voted on by the people. Changes were made in 1830, 1846 and 1850. Sessions of the Legislature were, at first, annual, but, after 1846, biennial, and elections of members of the House changed in the same way, while the terms of Senators were changed from three to four years. In 1830 the term of the Judges was limited to six years. It had before been during good behavior.

A voter must be a white man 21 years of age, a citizen of the United States, resident one year in the State and three months within the county, city or town. A Representative must have resided in the State two years, in the county, city or town he represents one year, and be twenty-one years old. A Senator with the same residence must be twenty-seven years of age. The Governor must be thirty years of age, a *native citizen* of the United States, resident four years in the State.

Illinois was authorized to form a Constitution and State Government, by an Enabling Act of Congress, April 18, 1818. A Constitution, approved by the people, was presented to Congress and approved by it, December 3, in the same year. The Legislature held biennial sessions. Representatives were elected for two years, Senators, Governor and Lieutenant-Governor for four years. All white male inhabitants, resident six months in the State, were authorized to vote. Most of the subordinate officers were appointed—the Judges and State officers by joint ballot of the two Houses of the General Assembly, others by the Governor and Senate. The Judges of the Supreme Court were associated with the Governor in approving laws before their passage—a novel feature in the Valley.

A revised Constitution was approved by the people in 1848. The elective principle took the place of appointment, the veto power was confided to the Governor alone. The Judges of the Supreme Court were elected for nine years, of the District Courts for six years, County Judges for four years. A Representative must be twenty-five years old, a citizen of the United States, three years resident in the State, and one year in the county or district. A Senator must be thirty years of age, a citizen of the United States, five years resident in the State and one year in the district. The Governor must have been fourteen years a citizen of the United States, ten years a resident of the State.

Articles relating to revenue, corporations, common lands, and the public debt were added to this Constitution. A proposed new Constitution, prepared by a Convention in 1861, was rejected by the people in 1862. The votes, for and against, were on party lines. One of the features of the separate votes on the section relating to the colored race was the marked hostility to their citizenship and presence in the State.

The citizens of Missouri petitioned Congress, in 1818, for permission to form a State Government, and a contest, continuing two years, ensued in that body between the free and slave states, which resulted in an agreement between the two sections, in regard to the formation of new States with or without slavery as a legal domestic institution, known as the "Missouri Compromise." Missouri was to be admitted as a slave state but no other was to be formed in the "Louisiana Purchase" north of the line of 36 degrees 30 minutes, which was, with the exception of a fragment on the southeast, the southern line of the State. This point settled, Missouri was authorized to form a State Constitution by an Act of Congress which became a law March 6, 1820. A Convention formed the Constitution which was approved by the people, and accepted by Congress March 2, 1821, which took effect August 10, following.

All free white male citizens of the United States, twenty-one years of age, who had resided in the State one year, and in the county or district three months, were authorized to vote. A Representative must be twenty-four years old, a citizen of the United States, two years resident in the State, and one year in the county. A Senator must be thirty years old, a citizen of the United States, four years resident in the State and one in the district. The Governor must be thirty-five years of age, a native citizen of the United States, or resident of the Louisiana Purchase at the time of its transfer to the United States, and a resident in the State four years. The General Assembly met once in two years, Representatives held office two years, Senators, Governor and Lieutenant-Governor for four years. No acting clergymen or religious teacher could hold any office except that of Justice of the Peace. The Judges and most of the subordinate officers were appointed, until 1850, when the elective principle was generally introduced; the State officers term, generally, being four years and the Judges six years. Amendments were to be proposed by two thirds of each House, published in all the newspapers one year before the next general election, and ratified by two thirds of each House at the next session of the Legislature. Amendments were ratified in 1822, 1835, 1849, 1851, 1853 and 1855, the most important of which introduced the elective principle in filling all offices.

The Constitution of the Republic of Texas, which had revolted from Mexico and formed an independent government, was adopted March 17, 1836, by a Convention assembled for that purpose. Representatives were elected annually, Senators and Governor for three years. Judges were appointed by joint ballot of the two Houses of Congress. Slavery was introduced, and no free person of pure or mixed African blood could reside in the country without the special authority of (the Texan) Congress. Texas maintained its independence of Mexico by force of arms, but sought admission into the American Union. As it involved the extension of slavery and a war with Mexico there was a contest of some years' duration over it in the Congress of the United States. One of the great political parties of the country favored it. An Act of Congress approved the annexation on conditions which were accepted by Texas, and a joint resolution of Congress, approved December 29, 1845, made it a State in the Union.

A Texas Convention had framed a State Constitution which, October 13, 1845, had been ratified by the people and afterward approved by the Congress of the United States. Every free male twenty-one years of age, who was a citizen of the United States, or of Texas at the time of the adoption of the Constitution, resident one year in the State, and six months in the county or town, was deemed a qualified voter. All free males twenty-one years of age, who had resided in Texas six months before the adoption of the Constitution, were deemed citizens of the State. A Representative must be a citizen of the United States, or of Texas at the time of its admission into the Union, two years resident in the State, and one in the county, town, or city, and twenty-one years of age. They were elected for two years, and the sessions of the Legislature were biennial; Senators, the Governor and Lieutenant-Governor, with the same qualifications as to citizenship, must have resided three years in the State and must be thirty years of age. The Governor's term was two years, the Senator's four. The Judges were appointed by the Governor and Senate, for six years. The appointing principle obtained in filling most of the offices, State and local. One tenth of the revenue of the State was set apart for the establishment and support of free schools. This Constitution remained unchanged until the civil war.

Early in 1836 a Convention, ordered elected by the Territorial Legislature of Arkansas, assembled to prepare a State Constitution. The Legislature held that the right so to organize was conferred on them by the terms of the treaty which conveyed the whole of the Louisiana Purchase to the United States, which required that the inhabitants of the ceded territory should be admitted, "as soon as possible," to all the rights and privileges of citizens of the United States. This Constitution was laid before Congress March 1, following, and the State admitted June 15, 1836.

By this Constitution every free white male twenty-one years of age, being a citizen of the United States, resident six months in the State, was authorized to vote. The General

Assembly met biennially; Representatives must be twenty-five years of age, and were elected for two years; Senators must be thirty years old, resident in the State one year, and were chosen for four years; the Governor must be thirty years old, have resided ten years in the State if not a native of the United States, four years if a native-born American. He could hold that office but eight years out of twelve. There being no Lieutenant-Governor, the President of the Senate filled any vacancy that might occur in the office. The State Secretary was chosen by joint vote of both Houses of the Legislature for four years, the Treasurer and Auditor for two years. The Judges of the Supreme Court must be thirty years old and were chosen by joint vote of the Legislature for eight years; the Judges of the Circuit Court must be twenty-five years old and were appointed for four years. Judges of the County Court were appointed by the Justices of the Peace of the county, who were themselves elected by the people, for two years.

The Justices of the Peace formed the County Court. A Constable was elected in each township; a Sheriff, Coroner, Treasurer and Surveyor were elected by the voters of each county. No infidel could hold a civil office. The incorporation of banks was authorized, but this was withdrawn by an Amendment ratified in 1846. Amendments to the Constitution were made by vote of two thirds of both Houses of one Legislature and ratified by the same vote of the next General Assembly without direct reference to the people.

A Constitutional Convention framed a new Constitution, in 1868, which was ratified by the people. It provided for the election of a Lieutenant-Governor, introduced the elective principle generally, although the Chief Justice of the Supreme Court was to be appointed by the Governor and Senate. Education and finance received much attention, and Amendments, after having passed two Legislatures, were to be ratified by the people.

The inhabitants of Iowa Territory, finding that it had over 80,000 people, did not wait for an Enabling Act of Congress, but, in 1844, proceeded to form a Constitution, which they presented to Congress, for its approval, in December of that year. The boundaries made by that Constitution covered a considerable part of what is now Minnesota. Congress passed a Bill for its admission, with a large reduction of boundaries; but it was not accepted by the people. August 4, Congress passed an Enabling Act, giving the present boundary, a second Convention framed a new Constitution in conformity with it, which was ratified by the people, and an Act of Congress declared the State a member of the Union, December 8, 1846.

Every white male citizen of the United States, twenty-one years of age, resident in the State six months, and in the county twenty (after 1857, sixty) days, was an authorized voter. The sessions of the General Assembly were made biennial, the Representatives elected every second year, with one year's residence in the State and thirty days (after 1857, sixty) in the county or district, and other qualifications the same as a voter. Senators were elected for the term of four years, must have the same qualifications of citizenship and residence, and be twenty-five years old. The Governor must be thirty years old, a citizen of the United States, two years a resident of the State. His term of office was four years.

There being no Lieutenant-Governor, the Secretary of State was to fill any vacancy in the office. The Judges of the Supreme Court were appointed by joint vote of the two Houses of the Legislature, for six years, the inferior Judges were elected by the people, for five years. The other officers of the State Government, and most of the local officers, were elected for two years. An Article of this Constitution provided that the State debt should not exceed $100,000 unless authorized by a popular vote, and that only in certain defined cases. Another forbade banking and the issue of paper money.

Certain amendments were found desirable, which were framed by a Convention early in 1857, and the new Constitution was ratified by the people in the same year.

This Constitution authorized a State debt of $250,000, reduced the term of the Governor to two years and provided for a Lieutenant-Governor, gave the election of the Judges of the Supreme Court to the people, and reduced the term of the district Judges to four years. Banking, under certain restrictions, might be authorized by law. Various changes and additions were made in most of the other Articles without materially altering their substance, and many careful provisions in regard to education were introduced, among others an elected Board of Education, which was almost a second organized legislature for that interest, but might be remodeled or abolished by the General Assembly after 1860.

The people of Michigan sought the permission of Congress to form a State Government in 1832, believing they had the population required by the Ordinance of 1787. An early mistake as to the position of the southern point of Lake Michigan with reference to the mouth of the Miami River, at the western end of Lake Erie, gave rise to a conflict of boundary claims with Ohio, which prevented the passage of an Enabling Act. Michigan waited until 1835, when, finding by a census that they had more than 80,000 inhabitants, the Legislative Council of the Territory called a Convention, which framed a Constitution. It was ratified by the people, a State Government was organized, and application made to Congress for admission into the Union. The boundaries of the proposed State included only the lower peninsula and covered some territory claimed by Ohio.

Congress passed a Bill admitting the State but requiring a formal renunciation of the claim to the contested territory by a Convention to be called for the purpose, and compensating this loss by including the upper peninsula in the boundary of the State. The Convention, when called, rejected this condition; but a change in popular views led to the informal calling of another Convention, which accepted the condition, and, as this was evidently the decision of a majority of the people, Congress passed an Act admitting Michigan into the Union, January 23, 1837. The Constitution of 1835 gave to every white male twenty-one years of age, and six months resident in the State, a right of voting. The sessions of the Legislature were annual. Representatives were elected for one year and Senators for two; their qualifications including only those of voters and of being citizens of the United States. The Governor and Lieutenant-Governor were elected for two years, must have been five years citizens of the United States, two years resident in the State. Judges of the Supreme Court were appointed by the Governor and Senate, for seven years. Judges of the County Court were elected by the people of the county, for four years. The Supreme Court appointed its Clerks; County Clerks and Justices of the Peace were elected, the former for two, the latter for four years. Other county officers were elected for two years. The Secretary of State, Auditor-General and Attorney-General were appointed by the Governor and Senate, for two years; the State Treasurer by joint vote of both Houses of the Legislature, for two years. Careful provision was made for education, a Superintendent of Public Instruction being appointed by joint vote of the Legislature on nomination by the Governor, for a term of two years.

A new Constitution was ratified by the people of Michigan in 1850. It made the elective principle general, re-organized the Judiciary, and added many provisions relating to education, finance, banking, etc.

Wisconsin, having found by a census, taken in 1846, that she had over 155,000 inhabitants, applied to Congress for authority to form a State government, which passed an Enabling Act August 6, 1846. The Constitution, framed by the Convention appointed for that purpose, was acceptable to Congress but rejected by the people. A census taken in December, 1847, gave over 210,000 inhabitants. A new Constitution having been ratified by the people, Wisconsin was admitted into the Union by Act of Congress, May 29, 1848. By this Constitution all white males twenty-one years of age citizens of the United States, Indians not belonging to any tribe, those declared citizens by law of Congress, and foreigners having declared their intention to become citizens, all resident one year in the State, were deemed qualified voters. The qualifications of Representatives, Senators, Governor and Lieutenant-Governor were the same as for voters. The sessions of the Legislature were annual, the Representatives elected for one year, the Senators for two years, as also the Governor. Judges of the Supreme and Circuit Courts were elected for six years; Probate Judges and Justices of the Peace for two years. The elective principle obtained generally in filling all subordinate offices. The state debt could not exceed $100,000; careful provision was made for education, and amendments were to be approved by a majority of all the members elected to both Houses of the Legislature at two successive sessions, after which they were to be submitted to the people for ratification or rejection. The question of calling a Convention to revise the Constitution might be submitted to the people by the Legislature at its discretion.

Minnesota, in the latter part of 1857, had about 150,000 inhabitants, who, not agreeing on the boundaries to be proposed, did not seek permission of Congress to form a State Government. That body, not waiting for the expressed desire of the Territory, passed an Enabling Act, February 20, 1857, designating the boundaries as now existing. The Territory extended westward to the Missouri River, many—and among them a majority of the Territorial Legislature—desired to divide the Territory by an east and west line rather than by one north and south, as had been done by Congress. An act passed by the House of Representatives and Legislative

Council of the Territory to remove the capital from St. Paul to St. Peter, failed to become a law; a Constitutional Convention was called which separated, on party lines, into two bodies, each of which proceeded to frame a Constitution. Before closing their labors, however, they appointed a committee of conference which agreed on a Constitution, which was signed in duplicate by each body—they remaining separate to the end. It was ratified almost unanimously by the people and approved by Congress May 11, 1858.

By this Constitution, white males twenty-one years of age, who had resided in the United States one year, in the State four months, and in the election district ten days, and who were citizens of the United States, foreigners who had declared their intention to become citizens, and Indians and half breeds who had adopted the customs and habits of civilization, were deemed competent to vote. The frequency of sessions of the Legislature was to be ascertained by law. The qualifications of Representatives, Senators, Governor and Lieutenant-Governor were the same as those of electors, or voters, save that the last two must be twenty-five years of age. The elective principle was made general in filling offices. The terms of Governor and Lieutenant-Governor, Secretary of State, Treasurer and Attorney General were two years, of State Auditor three years. Judges of the Supreme and District Courts were elected for seven years; Judges of the Probate, or County, Court and Justices of the Peace for two years.

The State debt could not exceed $250,000. A provision allowing State Bonds, to the amount of $5,000,000, to be issued in aid of certain railways, was inserted by an amendment of 1858, but expunged in 1860. Amendments approved by both Houses of any Legislature might be submitted to the people. Being ratified by them, they became integral parts of the Constitution. A Legislature might also submit the question of calling a Constitutional Convention to the people. Careful provision was made for education.

When the Territories of Kansas and Nebraska were organized, in 1854, the "Missouri Compromise" was repealed and Kansas became the field on which the contending parties, upholding and resisting the further extension of slavery, struggled. From both sides of "Mason and Dixon's Line" zealous partisans hastened to this Territory to strive for supremacy. Great bitterness and considerable bloodshed characterized this contest for some years. Efforts to frame a State Constitution commenced in August, 1855, by the Free State party, whose Convention presented the "Topeka Constitution," which was ratified by those who voted, the opposite party not voting. The whole proceedings were without legal authority, and were severely denounced by the President of the United States. The Territorial Legislature, which was of the opposite party, took measures for framing another Constitution, in 1856, which resulted in the "Lecompton Constitution." Only certain clauses relating to slavery were presented to the people and ratified, the Free State advocates not voting. It was produced under legal forms and laid before Congress. Some of its provisions were deemed inadmissible by that body, which presented other terms for the decision of the people of the Territory. The parties opposing it rallied and defeated it. The friends of the Lecompton Constitution had held a previous separate election and voted for it, but the voting was not at a regular time, and the voters did not equal the number of those who had voted against it. A new Convention was called, a Constitution framed and submitted to the people, who ratified it, in October, 1859, but it was not approved by Congress until January 29, 1861, when Kansas became a State in the Union.

Slavery was excluded from the State. The sessions of the Legislature were annual, Representatives serving for one year, Senators, Governor, Lieutenant-Governor, and other State officers, for two years. Judges of the Supreme Court were elected for six years, District Judges for four years, Probate, or County

Judges, and Justices of the Peace, for two years. White males twenty-one years of age, resident six months in the State and thirty days in the election district, who were citizens of the United States, and foreigners who had declared their intention to become citizens, were competent to vote. No other qualifications were required in members of the Legislature or civil officers of the State. The public debt could not exceed $1,000,000. Amendments proposed by two thirds of all the members elected to a Legislature were to be submitted to the people for ratification at the next general election. The same majority of the Legislature could submit to the people the question of calling a Constitutional Convention, when they judged it necessary. A provision was introduced requiring the Legislature to pass laws to protect the rights of married women to the possession of property independently of the husband, and to equal rights in the possession of their children.

The Territory of Nebraska was organized by the same Act of Congress that called Kansas Territory into being. In the intention of the advocates of slavery extension Kansas was to become a slave, and Nebraska a free State, thus preserving the balance of free and slave States in the Union. Its northern position in the line of greatest free State emigration, and the comparatively small number of proslavery emigrants also pronounced in favor of that destination for Nebraska. There was, therefore, no contest here, as in Kansas, over that element of dissension in the Union.

The question of a State Government was first presented to the inhabitants of the Territory in 1860, but not approved. By request of the Territorial Legislature an Enabling Act was passed by Congress, April, 1864, authorizing the people of Nebraska to form a State Constitution. The estimated population was, at this time, but 30,000. Many of the inhabitants did not favor immediate action and the subject was suffered to lie over until 1866, when the Territorial Legislature framed a Constitution which was ratified by the people.

A bill for the admission of Nebraska as a State into the Union passed both Houses of Congress in the same year, but not being signed by the President, failed to become a law. Early in the next year a new act of admission was passed by Congress containing some stipulations not mentioned in the Enabling Act. It was vetoed by the President, for that and other reasons, but passed over the veto by both Houses and became a law, February 10, 1867. The State Legislature having accepted the terms of this act, Nebraska was proclaimed a State in the Union, by the President, March 1, following.

This Constitution made every male, twenty-one years of age, who was a citizen of the United States, or a foreigner who had declared his intention to become a citizen of the United States, who had resided in the State, county and election district for the time required by law, competent to vote. The sessions of the Legislature were biennial. Representatives, Senators, the Governor and subordinate State officers, except the Auditor, were elected for two years, the Auditor for four years; their qualifications were the same as for voters. There was no Lieutenant-Governor, the Secretary of State filling any vacancy in the Governor's office. Judges of the Supreme Court were elected for six years, other Judges and Justices of the Peace for terms to be determined by law. The State debt could not exceed $50,000. A majority of any Legislature could submit the question of calling a Constitutional Convention to the people.

The inhabitants of Virginia west of the mountains had long been discontented with what they considered the unequal relations of the eastern and western parts of the State. When the Legislature of the State, in 1861, joined the Southern Confederacy they remained loyal and took measures to erect a separate State Government by the election of a provisional convention which reorganized the State Government and called a Convention to prepare a Constitution which was submitted to, and ratified by, the people. The consent of the loyal Legislature of Virginia and of Congress having been given, the President declared by proclamation, April 20, 1862, that West Virginia would become a State in the Union at the expiration of sixty days.

All white male citizens, twenty-one years of age, resident one year in the State, who were not of unsound mind, or guilty of treason, felony, or bribery at an election, were entitled to vote. No persons not qualified voters could hold any civil office. Judges must be thirty-five years of age, the Governor thirty, Senators and the Attorney-General twenty-five. The term of Senators was two years, of Delegates (members of the Lower House) one year. The Legislature met once a year. The Governor, Secretary of State, Treasurer and Auditor were elected for two years. There was no Lieutenant-Governor, the President of the Senate filling any vacancy in the Governor's office. Judges of the Supreme Court were elected for twelve years, of the Circuit Courts for six years; inferior tribunals were to be organized, and the officers and their terms to be ascertained, by law. A Clerk of the Circuit Court and Sheriff, were elected in each county for four years; a Recorder, Prosecuting Attorney, Surveyor of Lands and one or more Assessors for two years. Townships elected a Supervisor, Clerk of the Township, Surveyor of Roads, and Overseer of the Poor annually; a Justice of the Peace every four years—or two, if the white population exceeded 1,200—and as many Constables as Justices, every two years. Provision was made for education, and a General Superintendent of Free Schools for the State might be elected for two years, and also County Superintendents of Schools. Amendments might be made by a majority of the members elected to two successive Legislatures which were then to be submitted to the people for ratification; and two thirds of the members elected to any Legislature might submit the question of calling a Constitutional Convention to the people, the Amendments adopted by the Convention, if called, to be submitted to the people.

Colorado was organized as a Territory by an Act of Congress of March 2, 1861. It authorized the people to elect a Legislature—consisting of a Council and House of Representatives, Treasurer, Auditor and Superintendent of Schools. All other officers, including the Governor and the Judiciary, were appointed by the President of the United States. In March, 1864, an Enabling Act of Congress authorized preparations for admission as a State into the Union. A Constitution, framed and submitted to the people the same year, was rejected. Another, submitted September 5, 1865, was accepted by a small majority and a Legislature and State officers elected under it.

The Act of Congress admitting Colorado was vetoed by the President, May 15, 1866. A second veto, February 28, 1867, again adjourned its admission, and, as the people of the Territory were not united in desiring admission, the Constitution and State Government passed into oblivion. March 3, 1875, an Enabling Act of Congress was approved, which left all further action to the people of the Territory and to the President. The Constitutional Convention agreed upon a Constitution, March 14, 1876, which was submitted to the people and accepted by them July 1, and Colorado was proclaimed a State in the Union by the President, August 1, following.

All males twenty-one years old, who were citizens of the United States or had declared their intention to become such, having resided six months in the State, and in the county or town as determined by law, were deemed voters, unless confined for crime, which disability ceased when they were legally set at liberty. Females could vote and hold office in school district affairs; and the Legislature could extend the general right of suffrage to women at its discretion.

The Governor and Lieutenant-Governor, State Superintendent of Schools and Judges of the Supreme Court, must be at least thirty years old; the Auditor, Secretary of State, Treasurer, Attorney-General and members of the Legislature must be twenty-five years of age. All these except Senators. were elected for two years—Senators for four years. The Governor had all the usual powers conferred by other States. The Legislature met biennially on the first Wednesday in January. The Judicial department was vested in Supreme, District and County Courts and Justices of the Peace. Judges of the Supreme Court were elected for nine years. District Judges for six years, County Judges and District Attorneys for three years.

Elaborate provision was made for education and benevolent institutions, to guard against State, county and city debts, and to prevent excessive taxation. The principle of election to office was nearly universal. Much pains was taken to prevent abuses by corporations, and to protect mining and irrigation. A proposition for a Convention to amend the Constitution could be submitted by any Legislature to the people, or a two thirds vote of all the members could submit to the vote of the people Amendments to any one Article of the Constitution. Several liberal modifications were introduced into the usual Bill of Rights. No public funds were permitted to be given in aid of denominational schools. All effort was made to protect every liberty and personal or public right. Many States in the Valley have, since 1870, endeavored to introduce improvements in this direction into their organic laws.

It will be seen by a review of this glance at Constitutional History that the political institutions of the Valley assumed their special forms under the superintendence of the East. The principles of the Ordinance of 1787 were applied by the United States Congress, whose members. for the first forty years, were mainly from the Atlantic States; the Constitution of the United States defined the general character of the new States and gave them equal rights with the "Old Thirteen;" and the mass of the settlers who erected them were originally residents and citizens east of the mountains. The structures erected by the great and wise statesmen of the Revolution were singularly well adapted to the genius of the people and the wants of the time, as also of the future. The work was thorough, the principles comprehensive, and the system employed in their application wisely free and elastic.

The sagacity, moderation and love of full and equal justice, as well as good order, displayed by the Fathers of the Republic, secured so much respect and veneration for their work from the people at large that, when they crossed the mountains and became constitutional architects in their turn, they carefully followed the models they had known in the East, and especially the forms presented in the Constitution of the United States. They were required only to preserve "a republican form of government," which gave them great latitude in details, but of which they did not very largely avail themselves. The Executive, Legislative and Judicial branches of all the State Governments were substantially alike. The General Government was so well balanced and proportioned that the idea of experimenting for something better does not seem to have occurred to them. With English good sense they were content to "let well enough alone," and though varying some of the details, according to circumstances, and enough to show that they were not simply slavish and blind imitators, they yet followed a common plan so closely that one State Constitution is a very fair sample of all—the chief differences lying in the wording and subdivisions of the instrument.

This general similarity, where there was so large an opportunity for diversity, shows how much more complete and vital is the unity produced by freedom than that obtained by compulsion. Community of ideas, circulating without pressure, banishes antagonisms much more effectually than the stress of authority. By the wise liberality of eastern statesmen the people of the West were left, with the least possible restriction, to found institutions according to their own minds. It was virgin ground and it would not have appeared strange if theorizing and experiment had gone fast and far. They, on the contrary, emulated practical eastern wisdom, studied the structures already built, and confined experiment to very narrow limits. The best models were generally imitated, with intelligence and judgment, throughout the Valley, and a truly national harmony and unity was the result.

Thus, the Constitutional History of the Valley is the best possible comment on, and justification of, the broad statesmanship and subtle prudence of the Legislators of the East during the last years of the eighteenth century. They trusted the people of the territories, governed them—and limited them in self-government—as little as possible, and, in return, found themselves revered as authorities and their best hopes and plans realized with a spontaneity and completeness extremely honorable to both sections and fortunate for the destinies of the country.

This respect for the calm and deliberate wisdom and patriotism of the early legislators of the Republic was a great benefit to the Valley whose early inhabitants were mainly simple backwoods farmers or emigrants from the mass of common people in the East. This class has never before been supposed equal to the burdens and duties of a profound and broad statesmanship. Here, however, they were required to found institutions, to decide on constitutional policy, and to lay the bases of a great national development. They had the penetration to discover who was the wisest teacher, and what were the best forms and principles to adopt, and their work, as a whole, proved to be permanent. No really fundamental remodeling has since been required. As the Constitutions were when they first went into operation, such they substantially remain. Most of the States have amended their Constitutions more than once—some of them many times—but the general features have not been altered.

The changes have, almost uniformly, been only such as a rapid growth required—adaptations of minor details to changing circumstances. Respect for the popular will has constantly increased. The framers of many of the first Constitutions did not see the need of consulting the people before setting the machinery of government in motion. Such an omission has not occurred since the early years of the nineteeth century. A large part of the Union, State and local officers obtained their places at first by appointment of the Governor, Legislature or other authority; but the elective principle has steadily gained ground and few places are now filled otherwise than by election. Changes have more often been made in financial and educational systems, in the conduct of subordinate local affairs, and in principles of temporary policy, which have belonged, some have thought, more to the legislative than to the constitutional field, in which, Legislatures not having produced satisfactory results, Constitutional Conventions have tried their hand.

In many of these cases the evil has not seemed to be within the reach of Legislatures or Constitutions. Arising from the new and perplexing complications of an unexampled development, they could be best remedied only by the checks and balances indicated by time, by the laws of business and society operating freely, and which experiments, legislative or constitutional, have often hindered more than they have helped. The jostling of interests, public, corporate and private, where expansion was so rapid, was unavoidable, and time only could show the right remedy. The resort to constitutional regulation has not, therefore, always been successful and then required to be undone, and experiment and change have gone on within certain limits; but success and failures in one State have been so many lessons for all the rest, and constitutional progress has kept a generally even step throughout the Valley, and, to a somewhat less extent, in the rest of the country. Every Constitution contains provision for its own amendment, when it is believed necessary, so that the Constitutional system is elastic and renders resort to revolutionary measures unnecessary and extremely improbable, especially after the emphatic failure of the South in the civil war. The Constitutional History of the States of the Valley seems to have furnished a complete vindication of the wisdom of confiding government to the masses of the people. They have been generally cautious and temperate and *common* sense has proved itself in general, in this field, to be *good* sense.

Partial, or one-sided examination, indeed, reveals much imperfection, and produces in some minds doubt as to the result. A judgment rendered from many party and other special standpoints frequently leads the prejudiced examiner to a serious questioning of the real excellence and success of our institutions. Their liberality often seems to have degenerated into license, public interests appear to be sacrificed to the ambition and greed of individuals, corporations, "rings," and parties, and true patriotism appears to have vanished. There have never been wanting many prophets of evil who seemed to make a strong case and to prove that the utmost peril was imminent.

The mistake of such views lies in confining the observation to one class of facts, which seldom fail to be more or less exaggerated by the assumptions that make them cover, or nearly so, the whole field of action. More careful and impartial study invariably discovers that the real evil was, or is, less than represented, was but a temporary phase in the general current of free movement, or was an effort by short-sighted and unworthy men to reach an impossible result. These evils, when real, were merely temporary, and only required to be distinctly comprehended by the people at large to be neutralized, and, in the course of time, have disappeared. So uniformly has this been the case in the whole past history of the Republic as to fairly justify the position that the prevailing character of moral, political, and business life is really healthy and sound, that the facts interpreted to the contrary are misconceived or temporary only, and that every evil existing at a given time will be replaced by its opposite sooner or later. In the cases where these evils are generally recognized and continue to exist, the whole past history of the country and of each section of it justifies the assumption that the Anglo-Saxon thoughtfulness and prudence underlying our whole life is only waiting to discover the effectual remedy, which it can not believe has yet been found. No fault should be found with this cautious habit, for it is the real source of strength and permanence in both English and American institutions. Experience and observation have more and more convinced this progressive race that radical reforms, hastily undertaken, usually defeat their aim by introducing more evils than they cure. The good sense of the people, therefore, leads them to wait till they can see their way clearly.

Reform moves slower in England than in the United States for the above reason. There is more to be unsettled, and more disturbance and confusion must ensue from the greater number of habits and relations that have grown up with time. The same may be remarked of the Eastern States as compared with the Valley. Re-adjustment is easier and less harmful in the newer States, and important changes have more generally —indeed, almost always—commenced in the West, and, if they proved successful there, they were adopted later by the East. This has been true, among other cases, of the removal of the restriction of suffrage to property owners, the extension of the elective principle in filling subordinate offices generally, and especially the State Judiciary. Constantly protested against as dangerous, they have spread from the Valley to the East and thence thrust an entering wedge into the institutions of Europe. The dangers prophesied have not been experienced;

the "leveling" resulting has been "up" instead of "down;" and the standard of official fitness and purity has improved instead of deteriorating; while the wider field of action and responsibility assigned to the people has made them more thoughtful and more intelligent in their criticism.

On the whole the Constitutional history of the Valley has proved, more conclusively than had ever before been done, that freedom and responsibility tend to raise the masses of the people—even the lowest—out of the condition of a *mob*—moved by blind impulses when it is not ruled by as blind and abject a submission to authority—towards manliness and true statesmanship. It is they who have been the real authors of these Constitutions and of the order and social progress resulting under them. They have proved themselves true and enlightened statesmen. The moderation and wisdom of these free and comparatively untutored backwoodsmen afforded a striking and significant lesson which was the only justification of the experiment of enfranchising four millions of slaves at a stroke. That experiment might well seem dangerous. That it has not been ruinous is due to the good sense of the Southern whites and to the elevating influence of manhood suffrage. The fortunate history of the institutions of the Valley in general, and of that bold venture in particular, proves that man is never so dangerous as when deprived of manhood rights, and never so worthy and useful as when enjoying them in their fullest measure.

CHAPTER XV.

NATIONALITY OF EMIGRANTS TO THE VALLEY AND THEIR ORIGINAL CHARACTER.

The first immigration across the mountains to the Valley in Western Pennsylvania and West Virginia, beginning about 1750, was from Pennsylvania and Virginia—the earliest largely from the latter. But the course of the valleys, and especially of the Shenandoah, invited the restless in the more western settlements of eastern Pennsylvania to move southwestward, and people from that state mingled with Virginians and North Carolinians in the first settlements of Tennessee. Boone and many of his companions started from North Carolina to settle Kentucky. Tennessee was held to be included in the original charter of North Carolina and Kentucky in that of Virginia, and, as a more general rule, Tennessee received settlers from North Carolina, and Kentucky from Virginia.

The first settlers were, in considerable part, from the borders or frontiers of the colonies. These backwoodsmen were uncomfortable in their relations with the royal governments which, after 1760, replaced the charter and proprietary governments, and which, in various ways, encroached on popular rights, or resisted the demand of the people for greater freedom and a larger share of influence in public affairs. In North Carolina, especially, there had been great discontent for a long period. Many resolute and ambitious men, whose ideas of their rights and determination to maintain them, together with their eagerness to secure better locations than the Atlantic coast offered for private gain, studied the remote parts of the country and found their ideal met west of the mountains. For the most part they had little property in the East, but their hardy enterprise was to secure it for them in the West. Although there were many of all classes, and from Various colonies, who helped to settle the regions south of the Ohio, the origin of most was to be traced to the laboring population of the "Old Dominion," and the "Old North State." Many of the representatives of the best classes of English society were to be found in the middle colonies, and while multitudes from the lower classes of Europe had filled up all the colonies, they had opportunities for "grading up" in the New World that did not exist for them in the Old. The "gentlemen" were far from being a useless class among the early colonists. In large part, they furnished a standard of good sense, propriety and dignity that made a great impression on the forming character of the general community around them.

Washington, and a multitude like him, moulded the founders of the new nation, in the Southern colonies, by presenting an almost ideal type of republican simplicity and nobility. This standard of manhood was borne across the mountains in the minds of the settlers, and the men who approached it most nearly rose to influence and guided social and political development in the Valley. A steady stream of settlers flowed into the southwest territory far into the present century.

After the close of the Creek war the Southwest received a large part of this stream of emigration from Virginia and North Carolina. It had already begun, in the last years of the eighteenth century, to join that from South Carolina and Georgia which crowded on the Creeks, or passed around them to the east and west banks of the Lower Mississippi River.

The Northern States began to furnish large numbers of emigrants to the West after the war of independence, but the stream did not become very noticeable until Ohio was thrown open, in 1788. New England, New York and New Jersey with Pennsylvania furnished most of the early and later settlers to the Northwest territory. Southern Indiana and nearly half of Illinois were occupied, in large part, by emigrants from Kentucky and Tennessee. In later times the bulk of emigration to slave States, or Territories expected to become such, was from regions south of Mason and Dixon's line; while the free States and Territories of the Valley were chiefly filled up from free States further east. Thus there was really threatened a radical difference of civilization in the North and the South, and it has often been maintained that it already existed. Economic and social affairs in the two sections certainly sought similar ends by widely different means, but the qualities of race were the same in each. In both, hardy enterprise was guided by intelligence, and the special advantages of the northern and southern basin were developed with great zeal and effect. The Revolutionary War demonstrated that a new race—the Anglo-American—had come into existence, and that the people of all the thirteen colonies belonged to it.

But multitudes not of American birth became immigrants to the Valley. The largest and most notable part of these were from the British Isles. In the early years of the present century the larger number of those who located in the West were from England and Scotland, Ireland furnishing a large emigration later. These last became laborers in the towns and on the public works, or located in newer States and Territories. Scattering widely, they were usually surrounded by Americans.

The emigrants from Great Britain, speaking one language, raised under the general influence of common ideas and similar institutions, with the same fundamental tendencies of character and aspiration, very soon received whatever was peculiar to the land of their adoption. British thought and British principles were imported by the first Atlantic colonies and became the foundation of American institutions. It was comparatively easy for the later arrivals to grasp the meaning of the transformations through which these thoughts and principles had passed and they readily became thorough Americans. If this were the case only with the more thoughtful of the first generation, in matters of custom and sympathy, it was sure to be true of all the descendants.

It has been demonstrated by history, that races radically different mingle completely with difficulty. The laws of heredity operate against intimate sympathy and harmony; common ideas and aims, common interests and action, need to operate, often through many generations, before strong peculiarities and antagonisms can be overcome. This was a comparatively slight difficulty with the English and Scotch, and even the Celtic inhabitants of Ireland and Wales, for Anglo-Saxon blood had circulated among them, and English rule, for many hundred years, had been at work assimilating them to English thought and custom and multiplying intimate relationships. Neither was it very difficult to bring other nationalities of Northern and Central Europe to a similar comprehension and sympathy. Modern Europe has borne the character of one great commonwealth in many ways, for at least twelve hundred years. The common religious bond, common learned languages, alternate conquests, diplomatic, business and social relations, have tended more and more strongly to familiarize them with each other, and especially in the last five hundred years.

But behind this intercourse lies the important fact that the nations inclined to emigrate to America were mostly, from a thousand to fifteen hundred years ago, of one race—the Teutonic—from which the Anglo-Saxon (and later the Norman) conquerors of England sprung. A broad and important base of common character, and many features of common development, made it easy to harmonize them, after a little time, with Anglo-American ideas and ways. Many Germans, Swedes and French Huguenots—who were, in considerable part, of Norman blood, and inclined by powerful religious sympathies toward protestant America—were among the earlier settlers who took an earnest part in establishing the Republic. There was a considerable stream flowing to the colonies from northern and central Europe from the first, and it grew constantly larger as the States consolidated into a strong and free Federal Union, which furnished the world with a new and higher idea of political liberty. Many came for political reasons, full of eager sympathy for free institutions, and many to improve the opportunity to raise themselves and their families to the comfort or opulence which the rich and cheap lands of America promised to all industrious settlers. All readily fell into line with native Americans, and fully appreciated the larger political and industrial opportunities here freely offered them. Thus, no important element of discord was introduced by the large streams of immigration from Europe directly to the Valley.

The French of the southwest were considerable in numbers at the beginning of the century—from 30,000 to 40,000—but the Franks, who conquered Roman Gaul (the present France) and gave it their name, were a German tribe and they had a later infusion of Teutonic blood through the Normans. They were flexible and intelligent by race, and soon heartily sympathized with the somewhat radical and pronounced theories on which the Revolutionary leaders had rested the structure of the Union. They were very soon, when once incorporated in the Republic, most hearty and useful citizens. They had long been in the Valley, and in business relations with Anglo-Americans for thirty years. They became a valuable element in building up the southwest. Comparatively few of the French came directly from Europe with the later stream of immigration. In the upper Valley they were enterprising fur dealers or lived a quiet, careless, joyful life as small farmers, hunters and " voyageurs " or forest guides.

CHAPTER XVI.

THE PIONEERS OF KENTUCKY AND TENNESSEE.

Kentucky, much of Tennessee, and the territory lying immediately north of the Ohio River, had long ceased to be, if they had ever really been, the immediate and permanent abode of the Red Men. It was the debatable land, the hunting and battle ground equally of the northern and southern tribes. On the hills and along the streams of this delightful forest they were sure to meet with abundance of game, animal or human. In settling here, the white man was certain to be assailed as an intruding enemy by all the tribes. From the south, and north, and west, they would suddenly skulk upon him, strike a quick, fierce blow and hastily retire. Judging him again off his guard, they were ready for a fresh attack.

But danger had no terrors for the backwoodsmen who first crossed the eastern watershed of the Valley. They rather courted it and gloried in it. It furnished an agreeable excitement and stimulus to daily life, otherwise somewhat monotonous. Although too civilized and careful of their wives and children, too eager to gather around them the comforts of eastern communities, to seek it as the business of life, they had not lived in and roved through the wilderness from boyhood without catching more or less of the features of the wild man's character. This was often a mischievous spark to the tinder of the Indian's nature, who enjoyed the contest with a worthy antagonist, whose bravery and skill he admired, some of whose conveniences he coveted, and whose permanent presence and scornful rule were bitterness and gall to him. Thus he alternately made peace and war, in utter defiance of consistency, until his spirit was broken by the fall of Tecumseh, and the destruction of the hostile Creeks during the war closing in 1815.

Though it was a single phase of experience among the pioneers, lasting scarcely more than twenty years in any single region, it produced a deep and permanent impression on the character of the whole Valley. Cut off from the hope of aid in an emergency by the hundreds of miles of forest and mountain that lay between them and eastern population, they stood firm, trusting only in themselves for help. This self-reliance, constantly exercised through the whole of a vigorous manhood, and wrought into the character and habits of the young, developed a singular mental robustness and confidence. Success could not have failed them had the difficulties been ten times as great; but the dangers were great and constant enough to call forth their best energies, and the success sufficiently difficult of attainment to give it the highest value in their eyes and afford great self-satisfaction.

The fame of the "Long Knives"—so the settlers below the Ohio were called by the tribes—among the Indians was great. A stirring life in a fine climate, and comparatively few of the vices of savage or civilized life to diminish physical vigor, produced a tall, large framed and muscular race. The body and the mind were fairly matched. The red man could admire strength, subtlety and courage as well as the civilized white. They sometimes tried to adopt the white "braves" into their tribes. Daniel Boone was a fine specimen of all the pioneer virtues, and though his rifle was very fatal among their war parties they were very anxious to capture and "tame" so distinguished a white warrior. Calm, cool and extremely skillful as a hunter and fighter, he was free from the darker passions of malice and hatred. Caught for once, with twenty-seven companions, at his dinner, by a large party of Indians, resistance was useless. The Indians spared all the party for his sake, hoping he would consent to adoption into their tribe. He was treated with great courtesy and remained with them quietly, to insure the safety of his friends, until he learned that his own fort was soon to be assailed by an Indian expedition, when he stole away alone, put Boonesborough in order for resistance, and successfully defended it. Though prominent for bold and daring deeds he was only one among multitudes.

This undaunted courage and confidence, which no danger could subdue, which found an attraction and romance in appalling adventures, has often been displayed by communities who made war a business, but probably was never before joined so completely to the habits and virtues of civilization. Their chief interest was still not war and adventure, but settlement and cultivation. They were simple farmers, endowed with warlike virtues. The warrior and the adventurer in them did not expel the quiet plodding virtues of civilized life. Those simply came forward, at need, to protect and cherish these. It was an admirable basis of character and habit on which to build free institutions.

All Indian claims—supposed to be real or just—to Kentucky and much of Tennessee, had been purchased from the various claimants, but the Cherokees and Creeks were annoyed by the growing strength of the settlements on their borders, and individual white aggression or violence often gave them the pretext for war they wanted, while all the tribes north of the Ohio considered Kentucky as their hunting ground, and could not resist the passion for keeping up their immemorial custom of roaming and fighting there; and until the two became States, with a large population, whom it was ruin for the Indians to attack, the settlers were required to defend themselves. The backwoodsmen of the Eastern States continued to wander along the bridle paths that crossed the mountains, unawed by the almost incessant Indian war with all its butcherings and destruction. The valleys of Eastern and Middle Tennessee, the slopes and bottoms of delightful Kentucky—which rested its head on the mountains, bathed its limbs in the Ohio, and its feet in the Mississippi—were irresistibly attractive to them when compared with the harsh and sterile regions on the eastern slope of the mountains; for even the mountainous parts of the Valley have a softer, more fertile and inviting aspect than elsewhere.

They came, therefore, not to fight but to find farms—for which they were not at all unwilling to fight if that was the price of them. Thus, while the inhabitants on the Atlantic were maintaining against England the native "Rights of Englishmen," and, having secured them by independence, were organizing institutions to render their possession of them complete and permanent, the often rude and rough but noble and true-hearted pioneers of the backwoods were extending the field of liberty and settling the foundations of the republic in the Valley. So far as they could, the English and the Spaniards confronted them and chiefly through the Indians.

But liberty and the welfare of the future were safe in their hands. Their ambition could not be persuaded to seek for anything but the farmers' modest competence and for a free and well ordered government of their own. These untaught men of the woods were as sound at heart and in judgment, and as moderate and wise in general conduct, as Washington and his fellow patriots of Virginia and Massachusetts. They were not, indeed, all from the frontiers of the Atlantic States, and most of them had the rudiments of learning. They would have been respectable and prominent in any community where good sense and weight of character had influence; but as a whole they were unpolished and very moderately educated in books and the refinements of life. They were, still, the solid material out of which the durable structure of the American Union was built. They had the capacities of statesmen and all the best instincts of civilization. Culture and polish would come with opportunity and prosperity; but none of the demands of the time failed to be fairly met.

During this period of fighting, domestic and social life assumed the simplest forms well conceivable in a civilized community. Luxuries and elegancies of furniture or dress and conveniences for labor did not abound, even at the East, in those times. Only the wealthy could procure them from Europe. Great simplicity prevailed on the borders of the eastern settlements; nothing but the absolutely indispensable could be carried over the mountains. A gun, an axe, an augur, an iron or earthen vessel or two for the purposes of cooking, with a very limited quantity of home-made clothing, formed the outfit of the emigrant, with an occasional drawing knife and other instrument or two for coopering. With these the house and its furniture were constructed, the forests cut down, game was procured, and the Indians conquered. Suitable garments were made of the dressed skins of animals, of flax, and, after a time, of wool and cotton. Great industry and ingenuity surrounded them, very soon, with rude, but substantial, comfort.

The virgin soil furnished them grain and vegetables in plenty; the woods and streams supplied them with the tenderest, most nourishing meats; and as the herds multiplied the finest products of the dairy abounded. Their tables were supplied with the rarest steaks, the most delicate fish, the most nourishing bread, the best butter, with honey, maple sugar and wild fruit. They had almost no market for their surplus, and hospitality was scarcely a virtue, it was attended with so little cost. Social qualities naturally flourished in this abundance, isolation, and community of danger. Similar conditions, continuing far into our century, made this a marked feature of western, and especially southern, life.

To all this bodily comfort add comparative freedom from the ambitions and small cares and anxieties of an artificial society, and the high spirit produced by danger and difficulty successfully overcome—a confident trust in their ability to meet every emergency and master every situation—and we have before us one of the prominent features of early life in the Valley, which gave it a manly and generous tone for all time to come. When this simple and genial freedom gave place, under rapidly increasing wealth and immigration, to the social forms and culture of the East, the mental tone and bent had been given and the force and vigor of character which lay behind them enabled the Valley to dominate all the opposite mental elements and social habitudes with which it came in contact. Not that it excluded them, but modified them by its persistence and superior vigor. It required the eastern citizen to become acclimated in thought and manner. A life so simple and natural rendered the artifices and shows of an old society odious to it. The self-confident, frank, and open temper which had grown so strong scorned and ridiculed the shallow pretence and artificial gloss that endeavored to impose on its presumed simplicity and ignorance. What was really sound and true it recognized and honored, and proved itself, in the end, capable of a high culture and a bright polish.

This energetic element had grown up, concentrated and strong, to large proportions in Kentucky and Tennessee before the prairie regions were open to settlement, and when that time arrived those two States sent out multitudes to the newer regions and occupied so much of the Valley as to impress their peculiarities on its whole future. These peculiarities were also strengthened by the general difficulties of a settlement of the interior which had no adequate market for nearly a generation after 1815.

The force of this peculiar development, which was raised to eminence by the great difficulties overcome so completely, naturally tended to exaggeration, and this was increased by the growth of the slaveholding system. With prosperity came wealth, and the whites became gentlemen of leisure as the close of the pioneer period of hardship and difficulty devolved most of the manual labor on the colored servants. The young men were not so well prepared to make the best use of leisure and, in many cases, the self-confident assurance of the fathers became vices more or less offensive in the sons. This, however was a temporary phase which good sense and education gradually restrained. The poorer and less fortunate in mental balance became, often, the noisy and fearless blackleg and gambler of the river town and the frontier, and gave an air of rudeness and violence to far-western life and an undeserved ill-fame, to a certain extent, and among superficial observers, to a noble race. Exaggerated virtues become vices everywhere and "tares" grow among the "wheat" in every society. The openness and freedom of the Valley gave this class special prominence for a time, but the evil was corrected with the course of years, and the sooner that the virtues from which it was a temporary aberration, were full of soundness and vigor, and, exerting a free and quiet influence, at length balanced and regulated society by their weight.

Kentuckians and Tennesseeans scattered through all the new States and Territories. They were even more "irrepressible" than the ideal Yankee, for their buoyant assurance carried them, everywhere, to the surface. They furnished to the country its typical orator in Henry Clay, many of its weighty statesmen, of its great generals, and its president most beloved and revered after Washington. These oldest Valley States furnished many of its leading forces to the country and impressed their character ineffaceably on its whole history.

CHAPTER XVII.

NEW ENGLAND IN THE WEST.

The settlers of Ohio during the early period were chiefly from New England. Commencing later and with previous careful organization, which was immediately placed under the protection of a Territorial Government supported by United States troops, traveling over a route that had long formed a military road, and confining themselves, at first, to compact settlements near the Ohio, they were able to surround themselves with many of their accustomed comforts and conveniences, and to continue, in the depths of the continent, very much the same manner of life they had led in New England. A fort, comfortable cottages, accommodations for schools and religious services, were already prepared when the first families arrived. Twelve years had passed since the Declaration of Independence had been issued, and republican ideas had taken definite form, in the previous year, in the " Ordinance " and in the Constitution of the United States. A large population had already firmly established civilization south of the Ohio, the Indians were, in a few years, to be pushed out of their immediate neighborhood and awed into tolerable quiet by a final defeat.

The conditions, therefore, for the Ohio settlements, were very different from those that attended the early growth of Kentucky and Tennessee. While the discipline of these earliest pioneers had tended to the development of a courageous temper—a bold, confident and outspoken independence of feeling—the later New England settlers were able to devote themselves, in comparative security and comfort, to the working out of the new ideas of the time. It was a different stock and had here a different discipline. At first it was New England transferred, with all its habits and peculiar institutions, to the woods, carefully upheld and nourished by previous organization and constant military protection; but the boundless space about it, the freedom of the woods, and the rudeness of frontier life, dissipated much of the strength and controlling force of organization, threw the individual upon himself, and left the fundamental quality of the New England mind to a free development. The German and Quaker elements of Pennsylvania mingled with it somewhat and enlarged its mental horizon by intimate contact with new ideas and habits. Whatever, therefore, of strictness and narrowness might attach to the descendant of the Pilgrim Fathers, in Massachusetts and Connecticut, was modified and partially removed here by new suggestions and both mental and social freedom from restraint, even of public opinion.

After the first six or seven years of danger from Indian attack, during which military organization was kept up, and adventurous scouts and sentinels became skillful in the wild warfare of the woods, and communicated to the new settlers in general a little of the boldness and confidence of Kentuckians, they settled down to the individual toil and struggle unavoidable in laying the first foundations of a great commonwealth in a vast region wholly new. During this period the real fundamental character of these people developed freely. The New Englander adapted himself to the changed conditions and was better prepared to organize a new State than if wholly fresh from an eastern community. In twelve years from the day the first house was built in Marietta, the Northwest Territory had forty-five thousand inhabitants; and when the war of 1812 broke out there were two hundred and fifty thousand souls breathing the free healthy air of the woods of Ohio. All these soon caught the spirit and tendency of the first settlers, were subjected to the rough discipline of pioneer life, and built up a newer, fresher and more natural New England in the West.

New England society and institutions had been formed on English models before the liberal and expansive ideas of a later time had taken form. Their reconstruction here, completed their return to nature. The Revolutionary era had passed and a new departure had been taken. Laborious and simple habits and warm sympathy between all classes, begotten by the community of poverty and struggle of pioneer life, freed them from prejudice. Consequently the First Principles of political and social science, enunciated in the Declaration of Independence, were more fully incorporated into the thought, habits and institutions of the Northwest Territory, and grew with lusty vigor in the healthy industry and quiet of the woods and prairies. Thorough republican principles had a certain degree of resistance to meet and overcome in the East from other forms of thought, and habits inherited from England, before they could be perfectly embodied. In the West the people were, at first, widely scattered and society was very much broken up by the extensive spread of pioneer settlement. Mind and habit were left free, for a time, to expand under the influence of the new ideas, and the people were then reassembled to form a new body politic, and remodel institutions under the freest and most natural forms.

Of all Anglo-Saxons the people of New England were the most orderly, the most logical in thought, and the most persistent in applying their mental conclusions to practical life. The mental capacity was shared by the Virginians—who stand as representatives of the Southern colonies as the people of Massachusetts do of the Northern. In fact, the Virginians possessed the quickness and vividness of conception to be seen in the French, and had the high honor to give the first and fullest expression to the thought and aspiration of all the colonies in the Declaration of Independence, as well as to furnish the most typical patriots and statesmen of the Republic in Washington and Jefferson; but they had not the practical tenacity and logical consistency of the New Englander.

They tolerated slavery and retained many English forms and habits not in harmony with the new growth. They had the misfortune to introduce forced labor into Kentucky and Tennessee, and the noble and simple-hearted freemen there wanted the mental clearness and decision to divest themselves of it when first acting constitutionally. The New Englander in the West acquired a more liberal logic, but it did not cease to be just and practical. He laid the foundations of the great Northwest—the most prosperous, free, and powerful region in the world.

New Englanders have always highly esteemed their own special institutions and peculiarities—which is very natural. With their usual forethought they proposed to organize their settlements so carefully that the savor and the vigor of New England life and customs should be transferred to the West. Marietta and its companion settlements were, therefore, arranged in the East, with orderly precision. The township officers were provided; the territorial organization began to operate simultaneously, and the East seemed transferred in all its completeness and peculiarities to the West. This attempt, however, was a failure, for the settlements as a whole, because they could not be kept compact.

Association lost its force for the time, the community became resolved into its individual components, who spread far and wide through the wilderness, relying on themselves almost entirely for a new start in life. The old German instinct of individualism reasserted itself with a greater emphasis than it had ever displayed in England or on the Atlantic coast. Society resolved itself into its original elements in the early and middle periods of settlement in the Valley more thoroughly than this race had known before since it emerged from the primitive barbarism where the individual was nearly everything and social force almost nothing.

But, in this scattering of the settlers, they carried all the elements of civilization with them, and reorganization at once commenced on a base more favorable to free action. The individual made more room around himself, so to speak, and the social and political structures resulting no longer hampered him at any point. He could put forth his whole strength, and, as he was as fully penetrated with a sense of the advantages of association and order as any European, or citizen of the Atlantic States, he inclined to reconstruct with all necessary thoroughness and solidity. Thus the institutions of the Valley proved, in the end, to be more liberal as to the individual, and equally vigorous and decisive in action. The ideal of freedom and strength in union was more nearly approached in the West than in the East. As settlement extended and these tendencies revealed themselves, the various restrictions to popular suffrage that had obtained in the Atlantic States were abandoned in the Valley. Their example proved contagious and extended back to the East. So, in a thousand ways, the Valley proved to be a liberalizing force in the country.

The careful attention of the intelligent leaders of settlement in the Northwest Territory was at once given to education; but adequate provision for it was attainable, at first, only in the towns and more populous settlements. The people spread over a vast region, the larger part of them were farmers, and more attention was paid to securing the best land, after danger from the Indians ceased, than to any other point. We see two hundred and fifty thousand people thinly sprinkled over much of the State of Ohio in the first twenty-five years following the commencement of settlement. Then the prairie sections of the West were opened, the northern parts of the State were safe, and there was much migration to those regions. The solitude of the woods and thinly settled prairies had become attractive to some; the desire for change and to secure the best lands of new regions inspired others; so that, sometimes, by repeated removals, families were formed and passed into the second or third generation in want of all the opportunities of education and social culture.

But, notwithstanding isolation and hardship, and though the surface of their life became rude and rough, the real New England type did not deteriorate. The wild growth was a healthy one; it was solid and firm. Western youth, if almost ignorant of books and of the habits of good society of the older regions, were bold, inquisitive and pushing; well versed in popular politics, and inclined to pursue their aims with a vigor that commonly secured success. The thoughtfulness, ingenuity and persistence of the Yankee were not lost. They acquired heartiness, independence and force, and kept up the advance in a definite direction, as a whole. They were ready to make sacrifices for public improvements, to promote education, and were extremely thrifty in the conduct of their private affairs.

The New Englander lost in the West the European peculiarities of thought and habit which, though useful in some ways, cramped and limited him in others. Social distinctions, political and other theories, a thousand modes of thought and habits of life inherited from an old and imperfect civilization which had grown out of circumstances long since passed away, but which left their impress on later life, were preserved on the Atlantic Slope by institutions originally cast in a European mould and preserved by commercial, social and literary relations across the ocean. To develop the full strength and peculiarities suited to the time and place of a new class of men and of ideas, to render the new nation truly American or Continental, this western discipline was greatly needed. The new isolation and the opportunity to *forget*—the different interests and aims of this new and vast interior world—recast the New Englander as they had recast the Virginian. Without losing his excellencies, he gained by girding himself more fully to a new career—gained in breadth and depth, even as his new horizon was more expanded and his soil and resources were deeper and richer.

He lost in sectional feeling, which is necessarily too limited, and gained—by contact with new and larger facts, and association with people of other regions and other nationalities on equal terms—the power of judging more freely and justly and in a larger sense. He became less a New Englander and more an *American.* The new boldness and force of independence the western people acquired under their long apprenticeship to solitude, hardship and difficulty fitted them to exert a controlling influence on new comers into the Valley whom they constrained to become mentally and socially *acclimated*, even as they must needs become physically. The intelligent, the cultured and the prejudiced from old communities, however strong-willed, must learn to clothe their thoughts and conduct in western style to secure influence, and thus the peculiar tone acquired in this region dominated all the vast multitudes of immigrants from other States and from Europe. They received, however, as well as gave, and were modified and greatly improved by all the solid worth and refinement that had matured elsewhere; but they selected what was appropriate and suppressed what they deemed unfitting.

The later New Englander usually brought to the Valley methodical business habits, a good education, the polish of an old and progressive society, and all these he imparted to the aspiring settlers of the backwoods and lonely prairies. He found an opportunity to display all the genuine power that was in him, on a broad field, and received many suggestions of value that would not have occurred to him in a narrower one. The West, as every new country, was merciless to shams but most kindly toward all that was true and valuable. Somewhat against its will, the East has felt the influence of the West, in many ways, and been benefited by it.

CHAPTER XVIII.

THE SOUTHERN PLANTER IN THE VALLEY.

The Southern Valley east of the Mississippi was settled to a small extent along the Gulf coast by the Spanish, French and English, previous to the American Revolution. Comparatively few Spaniards or Frenchmen remained, however, after the English took possession of it, and, except to the trading towns on the Gulf, and the east bank of the Mississippi, there was no extensive immigration before the severe chastisement of the Creeks by Gen. Jackson, in 1814. The Tennessee settlements which had extended below the bend of the Tennessee River numbered several thousand at the close of that war. Northwestern and southwestern Mississippi had many thousand settlers by that time. Many were from Kentucky, Tennessee, Georgia and the Carolinas. Others were descended from English, Scotch and Irish parents; some were from Northern colonies or States, and some from Louisiana. The forced labor system had been introduced by Spanish, French, English, the colonies and the States alike.

The hardships and difficulties which had been experienced in the upper Valley were comparatively little known here except in the settlements near the Tennessee River, and in later times in neighboring localities. Elsewhere the settlements were along the rivers; there was a ready market for agricultural products, and the special staples raised only there had a sure and profitable sale. Many of the settlers were well supplied with colored labor, from the first, and soon all were so. There was much more of comfort and no long period of helpless poverty for those who required money to pay for farms and improvements.

The northern part of Alabama was in the Valley of the

Tennessee and had no water outlet except by that river to the Ohio and Mississippi, so that it lay about four hundred miles farther from markets than Pittsburgh. It was 1,600 miles to New Orleans, by that route, though that part of Alabama is but 500 miles from the same place in a direct line. This, however, was but a small section of the state ; the larger part had access to the Gulf markets by its river system.

Pioneer life, for the multitudes in the early periods, except in the Tennessee Valley, was less embarrassed with difficulty, either in reaching the objective point for settlement or in producing a comfortable income, than the upper Valley. More conveniences, implements and laborers could be introduced at the first, or very soon accumulated. The first settlers east of the Mississippi were extremely various in origin, being adventurous people from the various parts of the colonies—or later, the States and Territories—and some immigrants direct from Europe. The original number, however, was not very large. The larger part of the settlers after the close of the war, in 1815, were from Georgia, the Carolinas and Virginia; many were people of wealth, character and position, many were young and enterprising men of good families and education ; while many more, perhaps, were the struggling poor who sought to retrieve their fortunes in a productive new region.

Prosperity was great and tolerably general, for cotton was in great demand and brought a high price for some years, and those who could profit by the opportunity soon acquired wealth. It is stated that many plantations produced a revenue of $40,000 per annum, in those times, and smaller estates in the same proportion. This extraordinary condition of things did not last long, but still, southern staples were always ready of sale and extremely profitable to raise. The employment of colored labor and the great advantage secured by the large over the small cultivators by the facility of increasing the area of their lands, very soon produced great differences in fortune, and ultimately two agricultural classes—the planters and the poor whites. The large plantations tended to increase, and the smaller to diminish. Capital must be invested in labor to secure it in abundance.

This system tended to make profitable agriculture a kind of monopoly of the wealthy and to raise a comparatively small class to an eminence resembling a European aristocracy. The planters ruled the extreme South by their ownership of labor, by the possession of capital, by their social position and their intelligence. In the early periods, while settlement was in active progress, this was only a tendency. It ripened fast after 1840 and became strongly defined before 1860.

This was in strong contrast with the upper Valley, where the general tendency was to equalize property, as far as individual differences of capacity and energy would permit. There, the labor system was built on the same race that controlled politics, and there was no tendency of agricultural property and resources to accumulate in a few hands, but rather the contrary. The variety of occupations in the North also helped to maintain greater equality among the people. The central Valley, or border slave States, formed a medium between the two, the tendency being strongly to the southern system of grading the classes, though it was partly counteracted by agricultural conditions similar to those north of the Ohio.

Viewed from the industrial point this southern system was, temporarily, an important advantage, since it rapidly developed enormous wealth, from the attention given to the cultivation of southern staples—and especially cotton, which was in great demand in Europe—stimulated the commerce of the country by furnishing a large part of its most profitable exports, and greatly aided to maintain the balance of trade with the manufacturing nations of Europe; but it was a disadvantage in the long run since it deteriorated the fortunes of the mass of the southern people. The poorer whites had few resources, compared with the poor of the North, wherewith to improve their condition, and fell to a continually greater extent, financially and mentally, under the control of the class which had so much the advantage of them in wealth and culture, and the influences which spring from them. The resources of the South were only partly developed, and a great loss to the general community was sustained, while various minor evils gradually came to the surface and increased in magnitude. Among the most important of these was the mental stagnation of the lower grade of whites and the unintelligent character of labor. It ultimately seemed evident that no region where labor was merely mechanical, where it had no mental stimulus or progressiveness in skill, could compete with regions where the contrary ruled. Resources are developed from the mental force that is put into the work, and the intelligence that controls the muscles of the laborer must, ordinarily, to produce eminent results, dwell in the same body. Oversight and direction, however intelligent, can not produce results in comparison with intelligent labor. Unintelligent labor is not flexible, not at ready command when changes are desirable, and immediate results are less with the same capital and numbers. For a moderate period this is not particularly observable, but in the end the difference is very great.

Yet, the loss in this direction was partly balanced by the gain in another. The depression of the two classes operated to raise the third. Among the immigrants to the Valley in the South were many gentlemen of the class that did such honorable service to liberty during the Revolution. Many were descended from the chivalry of England and France, where the blood of their forefathers had been "gentle" back to the dim twilight of modern European history. Many of the French in Louisiana were descended from the higher classes of the Mother Country; and the settlers from the southern Atlantic States included many whose hereditary endowments embraced all the advantages and tendencies of distinguished origin. They were gentlemen by birth, by position such as wealth and culture can give, and by the fine instincts and native dignity and intelligence which are the only excuses for an aristocracy.

To such natural leaders were joined the enterprising and successful who made equal fortunes by ability and the special favor of circumstances. These very often included persons who were coarse and rude, not very susceptible of refinement, though, for the most part, they caught, more or less, the spirit of the society to which success introduced them. After the beginnings were past and large incomes were secured, these classes usually committed the care of labor on their estates to overseers and had abundant leisure; the education of their families was usually cared for without regard to expense ; society became increasingly refined. The fervent climate which stimulated the generous qualities of the race, the freedom from care, the large incomes and the isolation of country life on large plantations, gave a rare geniality and compass to social qualities and furnished the singular spectacle in the newly broken wilderness and the mixed population, hastily and recently collected from many regions, of a society of which the oldest countries might be proud.

This class, when fairly developed and dominant in the South, contained a few hundred thousand among several millions of whites; but their mental influence was deeply felt throughout the Union. They possessed many most agreeable and valuable qualities. Generous and amiable, with an assured position and abundant incomes, they were rarely severe masters and the kindness and sympathy of the patriarchal relation was much more frequently represented between the master and servant than the outside world was inclined to believe. With some painful exceptions, gentleness, rather than severity, characterized the master. Pecuniary difficulty, which sometimes broke up life-long relations, the occasional tyranny of paid overseers, or the rise to wealth of coarse and violent men—all which must be considered exceptions to the rule—were the common causes of abuse of power and oppression of the helpless. The absoluteness and fixity of the relation usually rendered the master the more ready in kindness.

The servant was of the gentlest of races, apparently wanting in the mental robustness and force required for strong self-assertion, revering the master and his race as superior beings, with an overflowing abundance of light-heartedness and the emotional nature that readily seeks expression in strong attachment. This race was but a few generations removed from absolute barbarism, at the longest, and many had been born in it. The favorable influence of their white masters on them must now be conceded in comparing their conduct, during and after the civil war, with that of the same race under self-government in Hayti, or under English control after liberation in Jamaica. It can not be doubted that more happiness and less suffering reigned among the mass of Southern slaves during servitude than after they became freedmen. It is being tested whether or not they can, as a race, maintain with honor the character and dignity of citizens on their own resources. No trial can be considered complete until generations shall have displayed their tendencies and real capacities. Character is of slow growth ; yet the commencement is full of promise.

Perhaps the finest and most honorable character in which the Southern slaveholder appeared was in that of an American citizen. Largely of aristocratic descent, habits and immediate surroundings, he proved an American and a republican of the most pronounced type in all that related to the white race. No class in the republic more forcibly advocated or applied the principles, constitutional and judicial, on which it was based. Leaving the colored man aside, he was in fullest sympathy with that which was most distinctively American. The Constitutions of the Gulf States were even more liberal in admitting the elective principle to its fullest development than those of the New England States. The planter had leisure and ambition and threw himself, with French vivacity and Anglo-Saxon heartiness, into political life. The South long exerted a controlling influence on the politics of the country, and its general liberal development may testify that its influence was not injurious. The people of the Southern Valley were of more purely American descent, the great flood of European immigration being chiefly dispersed over the free States of the upper basin. The instincts of the class and their course in all matters unconnected with slavery were, and are, an honor to the Anglo-American race.

CHAPTER XIX.

FOREIGN IMMIGRANTS AS AMERICAN CITIZENS.

The Colonies which, in 1776, declared their independence, and permanently established the Republic of the United States of America, had been more than one hundred and fifty years in reaching a total population of about three million. In 1790 the population of the whole country was about 3,200,000 whites and 700,000 blacks. The growth had been slow. The population of New England in 1760 was not far from 400,000, almost all of which was the increase of the twenty thousand Anglo-Saxons who emigrated from England between 1620 and 1650. The larger part of the immigrants who formed the other colonies came from Europe previous to 1700, and had long been undergoing the process of transformation from Anglo-Saxons to Anglo-Americans. The emigrants from continental Europe were an inconsiderable number compared with those from the British Isles and proved themselves true Americans during the war. That contest and its results proved that a new race had commenced its career during colonial times.

Previous to 1820 comparatively few foreigners found their way to the Valley. Probably not more than 150,000 out of the 2,500,000 then inhabiting the Valley were of foreign birth, including the French of the Louisiana Purchase and the Spanish of Florida. Accurate figures are not attainable, but that seems a fair estimate. After 1820 statistics of immigration were officially kept. From that year up to 1825 less than 40,000 foreigners spread over the whole country. Of these not over 25,000 came to the West. From 1825 to 1830, including the former but not the latter year, something more than 90,000 foreigners settled in the whole country. The population of the Valley had increased about a million and a half, not over

100,000 of which could have been foreigners; the increase of foreigners to the increase of native Americans being as one to fifteen at the utmost, and of foreigners of recent immigration to the whole population of the Valley as one to forty.

In 1840 the population of the Valley was about 6,700,000—an increase in ten years of 2,700,000. In this time immigration to the United States aggregated 540,000, of which perhaps half settled in the Valley, the remainder locating in cities and manufactories, or laboring on public works in the East. Between 1840 and 1850 immigration to the United States from Europe rose to about 1,350,000. The Valley had now over 10,000,000 inhabitants. The increase of 3,300,000 probably included 800,000 foreigners, or nearly one fourth. Between 1850 and 1860 more than two and a half million persons emigrated from Europe to the United States. Of these perhaps 1,500,000 settled in the Valley, which had gained, in that time, more than 6,500,000—the whole population being about 16,600,000. Of the 5,500,000 foreign born inhabitants of the United States, in 1870, probably upwards of three fifths were in the Valley. Of the 10,000,000 in the Valley in 1850 much less than 1,500,000 were of foreign birth, and large numbers of these were of American education. Nearly two thirds of the whole, however, had immigrated within ten years.

The early periods of settlement in the Valley were given to the formation of a truly American character and spirit; the foreign element being too small to do more than expand their views by aiding the native Americans to comprehend how things looked from other points of view than their own. Foreigners have always been too small a minority to exert much general control, even if the resolute spirit of native Americans, their intelligence and aggressiveness, had not marked them as the necessarily dominant race.

There has always been a fear in the minds of thoughtful, but not fully instructed, patriots that the large numbers of foreigners, who so readily reached the position of citizens under the naturalization laws, might do harm to the future of the republic. It seemed to them unlikely that the Anglo-American race would always be able to maintain the firm control over their institutions necessary to their excellence, with so large an element from abroad able to turn the scale by their votes at a critical time. In the midst of the great tide of immigration, soon after 1850, this apprehension was embodied in a political party which undertook to exclude foreigners from official position; but it soon dissolved. Every agriculturist who emigrated from Europe was equivalent to a moderate capital invested in the country, speeding its progress by developing its resources. It was impolitic, financially, to receive immigrants coldly and treat them with suspicion. To this was added the perception, partly from European history and partly from the observation and instinctive good sense of Americans, that foreigners who came as permanent settlers identified their interests with the home of their adoption.

The crowded population of European states, the monopoly of wealth, influence and station by hereditary transmission, the difficulty for the lower classes of improving their future, the burden of taxation and of conscription into the vast armies there maintained, made them feel like prisoners unbound and set free in America. Their first, and usually their only thought, for a series of years, was to get them a home, to surround it with comfort, and to provide a future for their families. During these years they became familiarized with American life and institutions, their children grew up as Americans, became imbued with the temper and spirit of natives and were, usually, fully prepared to assume the duties of citizens when the burdens of mature life fell on them.

America was so much an ideal country to their imaginations before they arrived, and the opportunities they found were really so great, that they adjusted themselves to American ideas very readily. Had they been required to assist in founding and shaping the form of institutions their want of experience and development must have had very unhappy results. But Americans, almost unassisted, had done this already; the work had become mature and all the tendencies settled before any large number of foreigners came. They were then too small in number to disturb the mighty current of American destiny as Anglo-Americans had settled it; they could only be carried along with it and this was to a future so promising that they did not wish to interfere with it. The prospect was almost as bright as anything they could dream. The European peasant, who had nothing but his strong arm and his habits of labor, and who had known no prospect of anything in life but to labor incessantly for a mere pittance, while others were enriched by his toil, found here a chance to labor for *himself*, to secure a home and farm of his own that should richly reward his patient industry; he was an equal among the free; he could educate his children; if they had gifts of mind and ambition for honors and place they had an equal chance with others. It was impossible that they should not enter as heartily into the spirit spread like an atmosphere about them as the habits of their early lives would permit. Their children caught the strong impulses of a free society and grew up true Americans. Those who came with education, or with property, found in them the means of entering on a new and high career of brilliant possibilities. Besides, the latent spirit of the Angles, the Saxons and Normans, which the despotic and aristocratic governments of Europe had suppressed in their races for ages, now woke into life. The ancient relationship of life and blood told. The steady industry of the parents engaged the approval of the thrifty American farmers and the sympathies of ancient blood relationship awoke in the children. The branches of the old race, long separated, reunited easily.

There was also a liberalizing influence in immigration.

Nations that live apart and often have, or think they have, contrary interests, on which wars are founded and misconceptions arise, learn to think ill of each other. Patriotism requires them, they think, to hate other races in order to be true to their own. To live in close contact with foreigners, with the same evident interests, is to enlarge patriotism, to learn that virtue and worth are of no country or kindred. It is a lesson which, well learned, elevates and ennobles a people, makes them high minded and just in international relations, and secures them respect, honor and much profit.

This liberal appreciation was learned when numerous representatives of many nations mingled freely with Americans in relations such as to bring out all their virtues. The ideas, the habits, the mental tone and different mode of viewing the same subjects, brought out in amicable intercourse or public discussion, opened a wider mental field to the intelligent, appreciative American. The more numerous the various points from which the same thing is regarded the more completely just and accurate is the final judgment concerning it. The mental breadth of America gained by immigration.

The circumstances were favorable for a fusion of the foreign qualities and for casting them in the native mould. Neighborhood, social and political life embraced all the various elements; there being no strong causes to maintain separation, and many to introduce intimate union, they mingled and brought a result differing in various ways from either of the constituents combining. Where two or more races can so unite, on terms not too unequal, it is an advantage to both. The union of races has been one of the most important elements of progress known to civilization. Physical and mental vigor are improved; the blood is made richer; thought is enlarged; a new genius, or mental element, is produced. So the hardy, bold Northman gained by contact with the vivacity and light temper of France. His solid qualities took on a brilliant polish. Conquering Saxon England, both Saxons and Normans were improved by the contact, and development in England was hastened. So the French in America have mingled with the citizens and improved the character of the downright, eager, business-like Anglo-Saxons; the Germans have brought physical stamina and mental equanimity, and the Irish quick blood and careless joviality.

All these and other special characteristics of the several races meet and mutually modify each other in society and business, by intermarriage, and by various modes of contact. They give and take, or, at times, perhaps, neutralize each other in the mental chemistry of the product, and make the Anglo-American nation richer in aptitudes, better balanced in mind and action, broader and more just in judgment. This has been the evident tendency. The larger flow of immigration has been comparatively recent, and the fusion, so far as much of it is concerned, is still very incomplete; but the process has been long in operation; it commenced with the first settlement of the colonies; it has been proceeding on a large scale since 1820, and the result is fairly evident. The digestion of the Anglo-American body politic is strong; foreigners have not endangered the Republic, have not upset public schools, have not sought to raise up an aristocracy. Evils have been abundant but not as harmful or permanent as they seemed. Time will dispose of them all.

CHAPTER XX.

EDUCATIONAL BEGINNINGS IN THE VALLEY.

A Republic is dependent, beyond any other form of government, on the intelligence of the people as a whole. The enduring excellence of its institutions, springing immediately from the people and constantly subject to their control and revision, can not exceed the combined wisdom of the majority. Should that majority consent to allow superior individuals to organize them, it must be capable of appreciating excellence; otherwise they will fail in submission, in continuously appointing equally wise administrators, or in preserving the excellent features long enough to allow them to produce their appropriate results. In a popular government the wisdom of the statesmen must be fully supported by the clear, steady intelligence of the populace.

So far as we have examined we have seen this to be the case in the Valley, in a general way, and that the wisdom of the people increased more rapidly in proportion than the growth of the country. Elements of danger and difficulty multiplied on every hand as population from without poured in; yet the people proved themselves masters of every situation, solved every difficulty in harmony with the principles first adopted, and made eminent progress in every direction. Whence they derived this intelligence, and how they perpetuated and increased it for three generations, are questions of interest. If they receive but a general and partial answer here it is because this was only a Period of Beginnings, and in following out their results at a later time, it will be more interesting and impressive to make the view of educational progress in the Valley fairly complete then. To notice when and where the tree, that afterwards bore noble fruit, was planted, and from what sources its roots drew nourishment, falls in with the present plan and is essential to a full comprehension of the character of this epoch.

Almost as soon as there came to be educated men in the Greek republics, nearly 500 years before the Christian Era, the importance of general education was perceived by the more thoughtful; but they were too far ahead of their times to be able to give prevalence to their views. The Christian church had no sooner emerged from its early persecutions than it began to educate the common people; but the disorders of the time allowed them small success. Serious efforts were made by Charlemagne to promote study, and the church, from 800 to 1200, issued frequent decrees, through Popes and Councils, ordering the establishment of schools for the children of the poor, without pay; but the disorganized and miserable state in which society was held by the Feudal System defeated these efforts. Besides, until the multiplication of books by the discovery of the printing press, in 1440, their scarcity and high price made progress almost impossible.

The religious reformers of the sixteenth century, a hundred years later, availed themselves of the press to promulgate their views, and naturally took much interest in the spread of education among the common people. Protestantism was an appeal from the authority of the few to the private judgment of each individual among the masses of the people. This appeal assumed previous instruction, the facilities for gaining it were now great, and education spread widely, especially among the Germans and Anglo-Saxons. The religious and political disorders of England prevented its taking the lead in well organized school systems, and Germany had the honor of making the first persistent and successful attempts to organize general education.

At an early period, in England, numerous grammar schools had been established by persons of wealth and eminence, which were largely increased from time to time, after the destruction of monastic establishments; and, for three centuries before the establishment of American Independence, sums that would be equivalent to three or four millions of dollars were expended annually on grammar schools and free schools, in educating the English people. Parochial schools were established in Scotland in 1696, which contributed greatly to general education. The wealthier classes in England have been educated, for many centuries, in the universities of Oxford and Cambridge. Holland and Sweden had taken pains to promote general instruction before the period of English settlement in America; and thus the nationalities which sent the most of the emigrants who aided in founding the Thirteen Colonies, sent with them the habit of, and the desire for, popular education.

The Puritans of New England immediately ordered schools to be established in all the townships, and all the other colonies, from New York to Georgia, followed their example, more or less closely, or rather, brought with them from England, Holland, Sweden, Huguenot France and Germany, schoolmasters and books, as a necessity of life.

Before 1776, there were eleven Colleges in existence in the colonies which remain to this day; and nine academies, founded between 1665 and 1774, are still in operation. Before 1800 twelve more colleges and twenty-eight academies, that are still flourishing, were founded. Out of New England, the want of common schools, organized by the government for teaching the rudiments of education, was supplied by church, or parochial, and private schools. In 1776 there were twenty-nine libraries in the thirteen new made States, and thirty-seven newspapers. The latter increased to 150 by 1800.

Washington, Jefferson, Hamilton, and all the statesmen who acted a distinguished part in founding our institutions, urged the greatest diligence in providing for universal education, and the framers of the ordinance of 1787 were mindful of this point, when they insisted, in this fundamental law which controlled the foundation of five great States, on "the means of education" being provided "and the encouragement of schools." In 1802, the Congress of the United States gave effect to this provision, by presenting the sixteenth section in each township, or the thirty-sixth part of the public lands, to the State of Ohio for the support of common schools, besides three whole townships in support of colleges. This became a common provision in forming the new states ever after.

The settlers, then, brought across the mountains a sense of the importance of education. During the Indian wars and the disturbed and scattered state of the settlements, they could do little to give effect to this feeling; but Kentucky and Tennessee made provisions for educational establishments as soon as they had organized governments, and Ohio imitated New England, from the first, as far as the scattered condition of the settlers and their limited means permitted. These two last mentioned obstacles were an almost insuperable bar to the advancement of education, in the newer and more thinly settled sections of the Valley, for more than fifty years. In the towns and more prosperous settlements, which were commonly near the navigable streams, these difficulties were soon conquered, to a considerable extent, and where a number of families lived near each other, and found a sufficient market for labor or produce to raise the means, they combined to support a school.

Often, however, they lived far apart, the State had small cash resources for distribution, or none at all, and multitudes of the young grew up with no means of education. Books were scarce and dear, and money scarcer still; therefore much of western society was, for a long time, wild and rude. A love of isolation and solitude, combined with the hope of bettering their fortunes and the spirit of adventure to introduce on the frontiers the habit of selling "improvements," as population began to multiply, and going to wilder and more lonely regions to commence anew. An emigrating mania, thus, for several decades, kept a portion of the people far from all educational advantages, and multitudes of the young grew up to manhood with little or no culture. But such a life had comparatively few of the disadvantages which surround ignorance in the midst of a numerous society. The woods and prairies allowed them to grow wild; they did not often become corrupt—a very fortunate circumstance.

To this is to be added that inhabitants from more favored regions settled near, or mingled with, them, from time to time; association with these modified their ignorance and rudeness, and, after the close of the war of 1812, a steady improvement went on. The intellectual ambition of the Anglo-Saxon race did not permit them to become debased, and prompted them to improve all the means of rising that fell in their way. The West was again indebted to the East and to Europe, when order began to rise out of the social chaos of settlement. In some of the eastern States an organized common school system had been attempted, about the beginning of the century, which was not very successful, at first, from lack of means and experience; they were repeated and improved, from 1812 to 1820, and began then to awaken the interest of all sections of the country. About 1830 the German methods, which had been thoroughly reorganized and much improved after the great wars with Napoleon, began to be studied by other nations, and capable men were sent, from different sections of this country, to observe and report on them. The result was a remarkable growth of interest in the organization of common schools in most of the old States.

The enthusiasm was, in due time, communicated to the West, which was beginning to feel the pulses of a new prosperity as its commerce and resources enlarged after the introduction of steamboats on its rivers and lakes. The large immigration of families accustomed to consider education indispensable, the westward flow of ambitious young men, recent graduates of eastern schools, who, with little or no capital but their education to start them in life, sought situations for teaching until a higher career should open to them, gave a new impulse to the tendency in the direction of general education which could not fail to become strong among all who felt anxious for the success of the new Republic.

The importance of a system of free schools began to be agitated in Ohio soon after 1820, and, at the same time with a great system of public works, one was organized by law, in that State, in February, 1825. The zealous partisans of each united, joined hands to carry through what neither could do alone, and commenced, in both cases, a new stage of development for the State, and, by the force of its example, for all the West. Indiana had already inserted an educational law in her statute book, as a beginning. Illinois was involved in many financial disasters by the inexperience and overhaste of her legislators. When, in 1845, she began to recover and to attend more carefully to educational interests, it was still found difficult to organize a satisfactory system and provide a sufficient fund for the education of all the young in the State. After many efforts, with imperfect results, a law of 1855 set her educational machinery in motion with great success.

About 1837 Michigan commenced a fine career as a State educator. Between 1850 and 1860 a very great improvement took place in most of the States of the West. Kentucky and Louisiana, and other southern, or slave, States, had endeavored to organize in the same direction. The General Government was generous in bestowing public lands, which laid the foundation of a liberal fund for popular education. In the free States the difficulties to efficient organization constantly diminished as population multiplied, as ignorance of methods was dissipated by agitation and by success in various States, and as resources increased. In most of the slave States, however, the hindrances to a good and efficient system of common schools tended to increase. Estates became larger and the white inhabitants more scattered ; the education of the blacks was found incompatible with their continuance in slavery, and a great inequality of conditions—inconsiderable at first—gradually arose among the whites, which rendered a common school system, like those of the northern States, more and more difficult. Education was not neglected, but was confined chiefly to the wealthier classes and to the towns, or to private schools or family tutors. Perhaps a larger number in proportion received a finished education.

In 1832, there were nineteen colleges in the Western States and less than half the number in the Southern part of the Valley. The number of pupils in the schools was one to five of the whole population in New England, one to eight in Pennsylvania, one to thirteen in Illinois and one to twenty-one in Kentucky. That State, Tennessee and Missouri were more successful in general education than the cotton-growing States of the lower Valley. Yet, leaving out the blacks, there was as wide a diffusion of intelligence as could possibly be expected in a country so new.

The Northwestern States, having fewer checks to educational improvement and a larger number of earnest and ambitious partisans of universal education, once fairly entered on this career of organization and reform, pursued it with a vigor and thoroughness worthy of all praise. Republican freedom, the invigorating discipline inseparable from the conquest of so many enemies, and the establishment of all the attributes and comforts of civilization in the course of a few generations in the wilds of the western continent, had the effect to add to the sober and conservative progressiveness of the Anglo-Saxon somewhat of the dash and vivacity of the Gallic race. The American has some of the characteristics of the Frenchman.

The rapid growth of the Valley encouraged these features of Anglo-American character. These rich resources and great opportunities stimulated conception and execution. In a few years a wild forest or a virgin prairie appeared like a long settled region. The entire complicated machinery of social, industrial, commercial and political life was organized. Between 1840 and 1860 a work, that might have sufficed for a century in any other country, was accomplished by the busy thought and the active hand of the Valley.

In 1850 the number of schools of all classes in the United States and Territories was 87,257. Of these, 42,360 were in the Valley; and, out of 3,642,094 pupils in all the schools in the country at that time, 1,581,000 were in the Valley. Ohio was the most compactly settled, the oldest of the Northwestern States, and had the largest number of inhabitants of New England origin. She had also given more careful attention to her schools for a longer period than any other in the West. She had about one fourth of the whole number of schools in the Valley in 1850 and nearly one third of all the pupils. The schools of all the East had been educating the future inhabitants of the Valley from the first. Therefore its measure of educated intelligence was always very much greater than could be furnished by its own schools. Its relations to the rest of the Union were greatly in its favor. It received a good portion of the educated men, of the best and most active business talent, and of the productive capital of the country. How could it fail to prosper?

In 1860 there were 115,224 schools of all kinds in the whole country. Of these, 63,700 were in the Valley—over 5,000 more than one half of the whole—while, out of the 5,477,037 pupils attending all the schools in the country, 3,175,800 were in the Valley—nearly two thirds of the whole. The increase in the number of schools in the whole country from 1850 to 1860 was 28,224, of which 21,340 were in the Valley. The whole increase in the number of pupils in all the schools of the Republic was 1,834,943, of which number 1,594,800, were in the Valley. The increase of pupils in all the rest of the country east and west of the Valley, in the ten years, was only a little over 240,000—the gain in the Valley was, therefore, nearly seven times that of the other States and Territories.

Modern intelligence is sometimes estimated by the circulation of newspapers. In 1850 there were 2,526 newspapers in the United States and Territories; in 1860 there were 4,051. There were 1,060 in the Valley in 1850; in 1860 it had 2,048. The gain in the Valley was 988; in the rest of the country 537—but little more than half as much. The whole number of copies of all these newspapers printed in 1850 was 426,409,978; in 1860 it was 927,951,548—about seventy-five million more than double. The number of copies printed in the Valley in 1850 was 95,071,615; in 1860, 239,817,362, the number here being nearly two and a half times as many. The absolute increase of the rest of the country was nearly one and a half times greater than the increase in the Valley during the ten years; but the western and southern papers had, in general, but a limited local circulation, while many of the newspapers of the East had been long established, were ably edited, and had a vast circulation in the Valley itself. Every number of these papers read in the Valley would diminish the difference by two. It is probable that all the numbers of dailies, semi-weeklies and weeklies printed in the East and sent to the Valley would restore to it much of the superiority in this point also.

The earnest and almost universal interest in education, the great facilities which had been multiplying rapidly for thirty years, and the general previous education of the immigrants, insured a high degree of intelligence throughout the Valley among all the white population, which the universal diffusion of newspaper literature aided very much to develop. Great prosperity and a long experience had enabled most of the more populous States, especially of the upper Valley, to perfect the organization of schools of all grades and to give them an extension so complete that the most happy results were obtained during all this decade. The qualifications of teachers were everywhere raised and greater thoroughness obtained. The same opportunities were perhaps twice as effective in 1860 as in 1840 in the great mass of common schools, and a much larger number in proportion received an extended education.

Moral and religious influences also gained in about the same proportion. In 1850 there were 18,300 churches in the Valley; they had increased, in 1860, to 28,800—a gain of 10,500. The gain in the number of churches in the rest of the country was but 5,400. This indicates great religious activity and a large proportionate increase of moral force. The value of church property in the whole Valley, in 1850, was $24,300,000; in 1860, $58,100,000. In the rest of the country the gain was $50,154,000, and in the Valley $33,800,000. The precious metals produced in California at this time, and the great prosperity of the whole country spread ease and wealth through the East. The West was employed in laying foundations. Costly church buildings became abundant in the former; in the latter a larger proportion were inexpensive. Church accommodations in the Valley increased from 6,400,000 to 9,700,000, a gain of 3,300,000 sittings; while in the rest of the country the gain of sittings was but 1,591,000—a much more extensive provision for religious instruction and all the ameliorating and elevating influences which it exerts on society was thus made in the Valley.

CHAPTER XXI.

INDUSTRIAL PROGRESS TO 1860.

Manufactures commenced in the Valley with the first families who occupied the log cabins and block houses raised in the incipient clearings. They could bring almost nothing with them through the forest paths that were followed across the mountains and valleys. What they could not do without their own ingenious skill must produce. With almost no tools these were rude enough, but served the purpose. But soon the active enterprise and inventive genius native to the race commenced manufactures at Pittsburgh. This was, necessarily, by slow degrees, for the people had little wherewith to pay. When the Indian war was over, however, manufactures prospered in Pittsburgh, which soon became famous for its glass and iron works, and ever continued to be one of the principal centers of this industry; so much so, indeed, that it was called the "Birmingham of the West." The Yankees of Ohio soon contrived to give it a rival in Cincinnati.

Manufactures were carried on by mechanics on a comparatively small scale, in most of the villages, for local sale, and trade gradually enlarged the call for the products of the chief manufacturing centers until after 1815, when they received a great impulse. Iron works multiplied in Western Pennsylvania, Ohio and Tennessee. Machinery for steam engines, and every variety of iron articles then in use, was made at Pittsburgh and Cincinnati.

In 1826, Cincinnati produced $1,800,000 worth of manufactures. It was estimated, in 1835, that the amount was $5,000,000. Pittsburgh was not far behind, and along the Ohio and many of the towns on the streams tributary to it factories sprung up at an early time. Accurate statistics were not easily obtained in periods prior to 1850, but the increase was very rapid. In 1840, Cincinnati produced manufactured articles valued at $14,500,000; and in 1841, $17,400,000; and in 1847, the production was believed to be nearly $30,000,000. In 1850, the whole Valley produced manufactures valued at $240,000,000. In 1860, at $440,000,000. Manufacturing establishments numbered 41,968, in 1850, and 52,137 in 1860.

While manufactures shyly stood in the background of the upper Ohio, as if uncertain of the reception they might meet in the middle Valley, devoted by its soil to agriculture, and by its Rivers, Lakes and Gulf to commerce and trade, these last availed themselves of its machinery to enlarge their operations a thousand fold. Not until the railroad era had prepared their way, did the more important manufactures venture boldly out from the vicinity of the mountains and establish themselves on the borders of the prairies, at Chicago and St. Louis. From those points they spread themselves through the West. The general diffusion, however, was deferred, in large part, until the civil war was over.

By the time three millions of people had settled themselves to the work of developing the resources of the soil in the Valley—which was only *one generation* after the first census in 1790 had ascertained that there were but little over three millions of whites in the whole United States—commerce and trade had secured the effective aid of steam.

Up to that time, the river currents and human muscle had been the main propelling forces used by internal commerce. The Erie canal was not opened to the lake for several years, and the wind could be but little used on the rivers. Muscle and current were opposed to each other when the rivers had to be ascended. The will power and muscular force among the stalwart settlers were great, but the difficulties opposed by vast distances were still greater. Man alone against nature is weak; when he can summon any desirable amount of natural force to his aid, and his mental power is turned from the use of the muscles to the product and supervision of machinery that obliges nature herself to become his drudge, he is really supreme.

So the property that floated on the streams of the Valley for exchange rose from a few millions in 1821, to $220,000,000 in 1841, and $350,000,000 in 1850. In the latter year, the commerce of the lakes was estimated at $140,000,000, and railroads had already begun to share the burden of transportation to and from the Valley, so that $500,000,000 would not cover the value of this interior commerce. Manufactures had now come to be produced in the Valley itself at the rate of hundreds of millions of dollars annually, and only part of these were distributed by the water routes, so that trade outside these lines was immense. We may suppose the trade of the whole Valley to have been worth, at least, one thousand million dollars a year at this time. This was only the beginning of the colossal activities developed in the Valley; for only now was the transporting agent capable of answering all demands.

All this vast business rested on agriculture as its base. The manufactures were only for the Valley, and were very far from supplying its wants. Millions of people were supported in the East and in Europe by the proceeds of the fabrics they made for the Valley people. More than half of the foreign exports of the country were drawn from the soil of this region, and a large part of the wealth gained by the Eastern tradesmen, manufacturers and capitalists was furnished from the same source. By 1852, $100,000,000 had been invested in building canals to furnish additional outlets to the produce of western farms, and from 1850 to 1860 some hundreds of millions of dollars were spent in building railroads in the Valley itself. In 1859 the revenues of the four trunk lines, connecting the northern Valley with the seaboard, were $19,500,000. We are lost, from this time, in vast figures, which labor in vain to represent to us the great results of development in this fruitful soil. The channels of commerce and trade whose spring was in the Valley, had become so numerous, flowed so freely, and in so many directions, that it is quite impossible to ascertain their sum.

Agricultural beginnings had been small. At first there was little demand for the food products the settlers could furnish so readily. But, by degrees, steam changed the face of the world and revolutionized business. Manufacturing and commercial activity produced hundreds of millions and sent them circulating through the Valley, the Atlantic States and Europe. Great cities multiplied everywhere, or increased their populations to be fed, at an unprecedented rate, and markets enlarged. Steamboats and railroads came when the world was ready for them. Agriculture in the Valley developed as markets opened and facilities for transportation were supplied. It was the Age of Invention, the Age of Beginnings for new and broader activities, the world over. To produce the machinery, and all the accompaniments of its use, required the labor of vast numbers of workmen, and other multitudes entered the shops and manufactories that were prepared to transform the raw material into articles of trade to be transported over the world. It was an extraordinary time—one of the great crises in the progress of mankind.

Most of the enlargement, in Europe and America, reacted on the Valley, in some form, and increased its prosperity. Its resources were inexhaustible and easily drawn out as required. The farmers had overflowing crops on a small percentage of the soil; they stood ready to answer all calls for food supplies and cotton. Had the demand been ten times as large it would soon have been met. This progress has always waited on the needs of the rest of the world, that is, on markets. The number of acres of improved land, in 1850, was 52,400,000; in 1860, it was 90,000,000. The value of all the land inclosed in farms was $1,400,000,000 in 1850; in 1860 it was $3,700,000,000.

The annual value of the agricultural products of the whole country was increased, during this ten years, by $1,000,000,000, and much the largest part of this increase was in the Valley.

The investment of capital from sources outside the Valley was very extensive. The people themselves had all they could do here to lay foundations. The farms were to be opened; private dwellings, fences, barns, agricultural implements and stock, absorbed vast sums. In older sections the public buildings for State, county, city or town and neighborhood uses; the roads, grading, paving, waterworks and various municipal undertakings, of city and country, had already been supplied. Here, they must be furnished while the people were in the act of settlement. Countless millions were so expended, and often by the help of loans from outside capitalists, for which they paid high interest. It was not, therefore, only its own people that were enriched. The gain in personal property and real estate, since 1850, was made, by the census of 1860, to stand at $2,500,000,000. It is very likely that the actual production of wealth invested in various ways, within and without the Valley, not here included, would add one thousand million dollars more to this sum. In 1850 it had taken seventy-five years to accumulate property worth $3,100,000,000 in the Valley, and it was nearly doubled between that year and 1860.

It seems a marvelous tale to tell; yet this was small compared with gains at a later period. All this was but laying foundations. Only a part of the resources lying near the surface had been gathered. They still lay on the surface, offering themselves to the first comer, in inexhaustible profusion; and beneath the surface, to be sought by practiced skill, there was a bottomless ocean of material for wealth.

CHAPTER XXII.

THE VALLEY IN 1860.

It is not easy to see how a people and a region could have been better fitted to each other than these Anglo-Americans, with an infusion of industrious Europeans, and the Mississippi Valley. The long Geological Ages had given it the precise form and outlets to be desired. By the help of facilities for communication with the Atlantic and Europe the right stimulus was given at the right time; by its barriers against ingress and egress in the early days a degree of isolation and discipline was possible, through a period sufficiently long to make a permanent impression, of the most desirable kind, on the character of the race which was to possess and rule it. Vegetable life had helped to store it with iron, with petroleum and coal, and gathered the richest surface mould; animal life had aided in various ways to strengthen its soil and furnish it with suitable qualities of rock for all its general purposes. Fire and water, expansion and contraction, ocean and lake and marsh, sun and winds and rain, were all controlled so as to do their work for the great advantage of this favored region. The history of Mound Builders, Indians, and European nations in their enterprises in the New World, had all been guided so that the right people should find no invincible difficulties in taking possession of its virgin treasures.

So, also, Anglo-American history on the Atlantic side of the Alleghanies had reached the most favorable point when the theatre of significant events was extended westward; the ambitions of France, Spain and England, and the schemes of Aaron Burr failed; the necessities of France and the foresight of Napoleon united every slope of the Valley politically as the Mississippi united them naturally. At the critical time the steamboat was invented for its waters, and again the railroad for its plains and prairies, and the markets of England were thrown open by free trade just when the Valley was ready to fill them with its produce. Thus, all the seeming accidents that played an important part in its history tell a tale of foresight and supervision—were made determining influences to accumulate and preserve a vast mass of material to be yielded up to those who would use it wisely, at the right moment to give an immense impulse to the progress of civilization.

Hardy, bold and ready for conflict and deprivation as only the rude backwoodsman can be; intelligent, industrious and attached to legal order as Anglo-Saxons naturally are; the adventurous, untaught and poor pioneers faced the forest, the red hunter and the hardships of an interior settlement without shrinking and conducted themselves with singular prudence. The chief difficulties surmounted, independent, uncurbed by arbitrary power or by education, the bold boisterousness of their young men seemed likely to reduce society to chaos. Nothing of that kind occurred. It was the flush of buoyant health, of overflowing vigor and the consciousness of capability, rather than the license of vice. It settled into highly civilized and polished ambition when once the idea was caught and the opening appeared. It was the roughness of the uncut diamond which intercourse with men soon rubbed down, revealing the rare quality beneath.

This people, with hints, suggestions and example alone from the other side of the mountains, formed their own institutions, selected their own laws and officers, legislated for themselves and became responsible for the prevalence of liberty and law. They made many a mistake in questions of detail, but none in constitutional principles. The mistakes they well knew how to remedy. The result was security to property, with the healthiest freedom of action ; general morality, without painful constraint. This wise moderation and good order highly favored the influx of people and of money. The quiet and intelligent could come without fear and investments could be made with confidence. Every possible barrier to the truest progress was thrown down; every possible encouragement to active enterprise was given. With such a prudent policy, Eastern and European capital stood ready to aid all useful undertakings. It was only necessary to show that they would pay by a speedy development. The greatest trouble was not too little confidence, too short a credit, but too much. Not too much trust in *men*, but in the rush of business. If development go fast in one direction it may outrun the progress made in others. An army must move together; its divisions must be in supporting distance. The divisions of industrial progress did not all move with equal step in the Valley, at times, and disorder sometimes appeared in the finances. But this was only temporary. A little time for the laggard branches to come up, a careful revision of past policy, and the race commenced anew.

The political history of the States was singularly free from resistance to constituted authority. A single case in Western Pennsylvania, of rebellion against a tax of the General Government, occurred during the administration of Washington in 1792. The Government was firm and opposition disappeared. Yet men were self-seeking and ambitious—there was more liberty to be so here than anywhere else in the world—every man had a recognized right to his opinion and to advocate it; every man was free to act, so he did not violate the law. There often appeared to be much turbulence; party spirit ran high and self-seeking did not always regard public or individual good. Every period had its peculiar troubles and fears; each party was sure the other would ruin the State or country; there were always examples enough of roguery, of crime, of artful maneuvering for illegal advantages, of stratagems to acquire place and power, to fill the timid and shortsighted with apprehension for the future. That future showed that those fears were gratuitous. The main facts were most honorable to the people, the parties and the multitude of individuals. Evils truly threatened vanished, not by main force, nor so much by excess of general purity, as by the law of interest.

Society is a body, as fully organized by natural relationships and laws as a human body. It has vital forces, like any other organized body, and its health can be secured best by an unrestricted operation of these forces; too much government coddling interferes with them; there was the minimum of government here; they had nowhere, in any place or time, operated so fully as in the Valley. The result was health and soundness. The vigor of life subdued and expelled disorder; a tendency to equilibrium—to justice and respect for public and personal right—asserted itself. That is a point of great importance; it has had much to do with the safe and rapid progress of American institutions.

Under all these favoring circumstances, by dint of an active, natural, healthy life—a life full of labor, where all were thrown on their own resources, and no system of organized favoritism helped one and oppressed another—progress was great to an unheard of degree. Almost every feature of the history of this region—the northern Valley especially—was so favorable, so rich in solid results, that it might seem almost as if the people ought to be spoiled by their own success. But life was too healthy and busy for that. It is the idle who are most likely to be demoralized by wealth.

There was, however, in 1860, a dark reverse to this bright side. It had gradually been taking form and consistence from the adoption of the Constitution. The labor systems of the North and South were in violent contrast, in some respects, and constantly tended to the disadvantage of each. The industrial difference was irreconcilable. The interest of the upper Valley required the full development of the lower; that it should be filled with a population such as naturally belonged with its great and various resources. As it was, there were a few lines of development only ; the results tended to accumulate in few hands; white labor was practically excluded and black labor did not open much market. In large part it was as if the southern Valley had been wanting, and the northern basin would have been, perhaps, better off had it been really absent if the facilities of ocean commerce could have been put in place of the comparatively small trade carried on between the sections. The world could not well do without the cotton; but it might be raised elsewhere, and only a small part of it benefitted the free States.

The North put a moral objection foremost, but much of its political strength lay in the industrial objection. The South grew irritated and indignant, felt injured and persecuted, and bitter feeling produced added evils. A sharp struggle was commenced on the embodiment of northern objection to slavery in a political party. It did not demand the abolition of slavery—it sought only to prevent its extension—but the desire to remove it lay at the bottom, and its extension was the only security for the South of retaining an equal influence over federal treatment of it. It drove the sections apart on a conventional line, more and more interrupted harmony, and threatened great evils to the West. Limits were set to its expansion when it was in full career; it might be cut off from the Gulf and the use of the river, its most natural outlet, and, at the very least, an artificial division would embarrass growth.

As it was a matter of feeling in favor of an institution interwoven with all their social as well as industrial habits, the lately increased facilities of intercourse by railroads could not overcome the difficulty any more than the interest connected with the river system could do it. Rather, the closer they were drawn together by outward forces, the farther apart they drifted in antagonism.

The railroad system had, in large part, monopolized the carrying trade because it was speedy and the principal markets of the free States lay directly east of them. The binding influence of the river was much diminished when another adequate substitute, which might answer all purposes for a long time, was provided. It seemed as if the South must suffer most; yet she lay on the Gulf and the ocean, and supplied most of the world's cotton. The political difficulty was increased by the superiority of the free and more populous North in filling vacant territory with settlers in a short time. A final struggle in Kansas tested this point, turned in favor of that section, and hastened the determination of the South to separate. This conclusion was a sad interruption to a great career. Both sections had worked out beginnings and were ready to reap what they had sown when called away from labor by the tocsin of war.

The means that had contributed in such a high degree to the wonderful development of the Valley, that had seemed to join the sections indissolubly, became the most efficient aids to rival armies. The telegraph, which had so expedited business, now conveyed military orders from, and information to, every important point. The work of months, by telegraph, river and rail, could be compressed into days. Armies concentrated by railroad in an incredibly short time, and their movements could usually be followed by long trains containing their baggage and supplies for support and defence or for aggression. The steamboat was equally useful, for, if it could not go everywhere, it could reach numerous important points, be made a floating battery besides, and become a powerful engine of war.

Both railroads and steamboats added to the magnitude and destructiveness of the conflict. Larger armies could be gathered, fed and rapidly moved from point to point; destructive engines of war of great weight could be quickly moved. But, inasmuch as the South stood chiefly on the defensive, these agencies were more harmful to her. Her coasts and rivers could be attacked by powerful shipping, and railroads took vast armies far into her borders, while the greater freedom and productive activity of her antagonist reaped vast advantage from the railway system that conducted the business of the North without hindrance, and kept up supplies of men and stores for the attack. But for these, possibly, she might have succeeded in breaking away, permanently, from the bonds that had been so useful and dear but now were so hateful.

CHAPTER XXIII.

THE CONFLICT AND ITS LESSONS.

The civil war was caused by a conflict of labor systems. The disapproval of the southern system in the free States was based on moral and economic grounds and on its inconsistency with the theories of democratic equality, on which American institutions were held to be founded. The resistance in the South was founded on the great difference between the white and colored races, which, in the belief of the southern people, met the moral and democratic objections; on the relations which their labor system sustained to all their industrial and financial interests and to their social organization; and on their absolute right to undisturbed control of a local institution which had been recognized in the formation of the Republic.

The conflict broke out on the question of the extension of that system. The South required its enlargement to maintain political equilibrium; the North refused to consent. The exact legal status of the question was violently disputed; the forces behind such questions permitted no common understanding and the South determined on separation. The free States were in possession of the Federal Government and refused to permit it. The sword alone could decide the question. The North considered it impossible to abandon either the fundamental principle of democratic liberty or the Union on which general prosperity depended. The South saw all its interests and its own personal liberties involved. Such was the Gordian knot of difficulty to be cut by war.

After the presidential election of November, 1860, South Carolina commenced preparations for leaving the Union. In February, the new confederacy was provisionally organized at Montgomery, Ala., which then included only the more Southern states from Texas to the Carolinas. Virginia, Tennessee and Arkansas were slower in their action, but decided in May to join their fortunes to the Confederate States. West Virginia, Kentucky and Missouri were divided in opinion. The bombardment of Fort Sumter, a Federal fortress in the harbor of Charleston, South Carolina, in April, 1861, opened the military conflict and "let loose the dogs of war."

From that time preparation was diligently made on each side, though nearly ten months elapsed before anything more than preliminary trials of strength occurred. The severest engagements were skirmishing compared to the serious work that followed. Indeed, it was not to be expected that citizens should become skillful in war without an introductory training and discipline. The battle of Bull Run, the campaign in West Virginia, the many fights in Missouri, and the few that preceded the advance of the Federal army under Grant on Forts Henry and Donelson in Kentucky, were all of that character. They were the first essays of citizens in arms who were learning to be soldiers. There was too much seriousness and resolution behind these, sometimes awkward and uncertain, essays in war not to make them extremely useful lessons. There was good material for soldiers on each side.

The active and decisive parts of the great conflict took place in the Valley, because its result depended on the possession of that fountain of resources. If the central artery of the Valley could be held by the South and its lower Valley defended, the armies in Virginia would not be able to decide the issue. In this view the taking of Vicksburg was a much more important event than the battle of Gettysburg, which sent Lee back to Virginia, for it opened the whole length of the great river to Federal use; and the battle of Chickamauga, with the subsequent series of battles ending with the capture of Atlanta and the dispersion of the great

Southern army in the Valley, had more effect on the result than the campaign in the Wilderness which drove General Lee from the Rapidan to Petersburg. Whatever the comparative size of the armies or the force and skill employed, it was necessary for the winning side to hold the Valley. It furnished the strength and resources indispensable to a continuance of the conflict by the South.

While the North was gathering and training its vast armies, the South hastened to occupy the frontiers of its wide field. A confused conflict raged from Kansas to the Potomac through the border States. The Confederate forces occupied West Virginia, though not in sufficient strength to hold the line of the Ohio. Kentucky endeavored to remain neutral, but many of her citizens organized both for the North and the South. Federal forces gathered along the Ohio, while the Confederate armies occupied posts on the Mississippi River in the State, and their lines extended across the lower part of the State from Columbus to the mountains, the three points of advance from Tennessee being along the Mississippi, from Nashville, and from East Tennessee through the mountains. The active work began in West Virginia, which, by the middle of July, was fairly in the hands of the Federal troops. A widespread conflict continued all the summer in Missouri, no less than sixty battles and skirmishes having occurred up to the close of the year. The general result, though not very sharply defined, was in favor of the Federal forces. There was less confusion and more of careful preparation in Kentucky, where the two armies did not hasten so much toward a trial of strength. This was regarded as the key of the situation, and a careful plan of Federal operations was not mature before midwinter.

The first project of invasion in the Valley, entertained by the Federal authorities, was that of sending an expedition on gunboats down the Mississippi to capture and hold commanding positions on its banks, make them the basis of future expe ditions into the interior, and isolate the western portion of the Confederacy. This was found to be a difficult matter, if not impossible, and a different strategy was soon devised—that of flanking and forcing the evacuation of these river fortresses by operations in the interior at their rear. In this plan the Cumberland and Tennessee Rivers played an important part, and the great features of the railway system of the southern Valley east of the Mississippi entered into it as a large factor. It played an important part in the years that followed, to the great advantage of the North and damage of the South. The lower part of the railroad system was of great importance to the Confederacy for the rapid concentration and transfer of forces, and transport of supplies to Virginia and the border.

From Paducah, on the Ohio, below Louisville, a continuous line of railway ran nearly due south to Mobile and New Orleans. From Memphis, at the southwest corner of Tennessee and on the Mississippi, a line skirted the northern border of the States of Mississippi and Alabama, to Chattanooga, in East Tennessee, and thence northeast between the parallel ranges of the Alleghanies to the tidewaters of the Atlantic, in Virginia. This line was intersected at Decatur, Ala., and Stevenson, Ga., from the north by a road from Louisville, which passed through Bowling Green, Ky., where a branch connected with Memphis. Chattanooga was connected by railway through Atlanta, Ga., with the Atlantic seaboard at Charleston, S. C., and Savannah, Ga., and with the Gulf at Pensacola, Florida. Vicksburg, a strong fortification on the east bank of the Mississippi, midway between Memphis and New Orleans, was ultimately connected by railway with Montgomery, Ala., and Atlanta.

The Confederate lines at Bowling Green were joined with the force at Columbus by the intermediate fortifications of Fort Henry, on the Tennessee, and Fort Donelson on the Cumberland. Paducah lies at the mouth of the Tennessee on the Ohio. Forts Henry and Donelson formed the center of the Confederate line, which, being broken there, would expose both Bowling Green and Columbus to an attack in the rear, or their communications with the Confederacy could be easily severed.

This plan was adopted by the Federal commanders with success. While a Federal army confronted the Confederate forces at Bowling Green, another, supported by a fleet of gunboats, ascended the Tennessee from Paducah and captured Fort Henry; the boats returned to the Ohio and ascended the Cumberland to Fort Donelson, the army crossed the short distance between the two rivers to the same point, and Donelson also fell. The Confederate forces at Columbus and Bowling Green were obliged, by this disaster, to withdraw without a struggle; Middle and East Tennessee were opened to Federal occupation, and the Confederate lines were reformed south of the Tennessee River on the northern border of Mississippi. The disadvantage to the South of having so large a territory to defend with inferior forces and warlike material was apparent; it was, in fact, decisive of the whole struggle. It gave too much advantage to their opponents in mental warfare, or strategy. In a smaller field, as in Virginia, where defensive strategy could be employed to make up for inferiority of numbers, they were more successful.

The Federal armies pressed forward against the new Confederate line. Forts Henry and Donelson had fallen in February, 1862. By April the antagonists confronted each other on the south bank of the Tennessee at Shiloh, or Pittsburgh Landing. Before the two Federal armies had concentrated the Confederates attacked the one nearest, at Shiloh, and one of the most desperate and characteristic battles of the war occurred. It was of extreme importance to the Confederacy to hold this line, for the Memphis and Chattanooga Railroad lay but a few miles to the south, and this was the most important, shortest, and, at that time, the only line of communication between the eastern and western parts of their territory. The loss of it might be fatal to them. The Southern army, about 40,000 strong, was confronted by the Federal force under General Grant with 33,000 men. General Buell, commanding the Federal army that had lain between Bowling Green and Louisville, was advancing to form a junction with Grant.

This would give the Union army a great superiority of numbers. The Confederate army, therefore, made a furious attack which was with the utmost difficulty withstood by troops, in large part, recently recruited and undisciplined. But the shades of night found them still in arms and resolutely refusing to acknowledge defeat, although nearly half their number had been disabled or killed. In the evening the army of General Buell began to arrive and another day was fought through with a great increase of force on the Federal side. The Confederate army was almost annihilated, but withdrew so bravely that its shattered and helpless condition was not suspected, and it remained a long time intrenched within a few miles, its defiant attitude conveying an impression of strength which it did not possess.

This disaster might, perhaps, have been repaired had not other parts of the field diverted so much of the attention of the Confederate Government. The fortifications on the Mississippi below Columbus were soon taken. Commodore Farragut captured New Orleans and the lower defences of the river, and the Federal army, under McClellan, was threatening Richmond, Va., the Confederate capital. The Federal forces also gained a foothold on the coast of North and South Carolina, and secured Pensacola. Only Vicksburg and Port Hudson held the two parts of the Confederacy together.

Under such a cloud of misfortunes the South might well have despaired. It did not, however. McClellan was repulsed from the Peninsula and the tide of war again rolled up toward Washington, and even crossed the Potomac into Maryland for a time. A vigorous effort was made throughout the South; fresh armies were organized, and a bold push northward was made from East Tennessee as well as from Richmond. General Buel was proceeding with his army from the neighborhood of Corinth to Chattanooga, when General Bragg, Confederate commander, suddenly transferred his army ahead of him across Alabama to Chattanooga, and pushed forward into the fairest part of Kentucky, and toward Louisville, which required Buell to repair to that point for its protection. After gathering vast and various supplies, which were much needed in the South, General Bragg succeeded in conveying them away in safety and in withdrawing his army without a great battle. Although disappointed in its hope of holding Kentucky and carrying the war into the North, the South was inspired with new energy by such successes after so many great reverses, and tenaciously held on its way.

Corinth and Memphis had fallen in June, principally by retreat after resistance became hopeless, and the most important line of railway joining the east and west of the Confederacy, between Memphis and Chattanooga, had passed mostly into Federal hands or been destroyed. The strong fortifications of Vicksburg, and the east and west railway line of which it was the terminus, became the mainstay and hope of the South. The Yazoo River and unfavorable ground protected the stronghold in the rear, and for more than a year it resisted the most desperate efforts of the Federal generals. By the invasion of Kentucky after having lost both that State and most of Tennessee, the South barely failed of recovering nearly all it had lost, which gave it a glimpse of the possibilities of war from which its sturdy courage and unbending will took all the encouragement it wished.

The winter found it still in possession of East Tennessee and the railway connections, so important to the Confederacy, at Chattanooga, and triumphantly holding Vicksburg. A long series of strategic movements and battles, covering much of Kentucky, Tennessee and parts of Alabama and Mississippi, had occupied the summer and fall. Arkansas had been the theatre of incessant conflict, but the bulk of the forces had been withdrawn by both sides to support the more critical operations in the eastern Valley. The bravery of the Southern armies had covered them with glory and required an equal valor and far greater resources on the Federal side to make head against them. The Confederate soldier was often in want of almost everything but the most indispensable means of fighting and keeping life in his worn, overworked and underfed body; while the invasion of a hostile country, the vast masses of men required and the abundant means of the North, made the question of supplies one of leading importance in the strategy and operations of the Federal generals. Compared with the Confederate, the Federal soldier may almost be said to have fought at his ease and in comfort.

By December 1, 1862, more than 1,300,000 men had been put in the field by the North, while, it is affirmed, the South had never half that number at once in arms. The entire number of different men in the Southern armies during the whole war is stated at about one third the whole number of its antagonists. The sacrifices of the North were immense and seemed inconceivable, but the devotion of the South to a constantly failing cause was not less honorable to its spirit. It is true that there were many, both North and South, who did not scruple to improve the opportunities offered, during the confusion of war, to enrich themselves at the expense of their government; and many, in the South, sought to avoid a personal share of the fighting after having exerted their influence to promote the desperate collision; yet, as a whole, the Southern people were disposed to sacrifice everything to independence, and the Northern citizens were ready to assume all the burdens required to preserve the Union.

The South displayed much energy, after the loss of the upper and lower Mississippi, of the central Valley and of most of its seaports, by the advances in force into Maryland and Kentucky. The North thought that there was reason enough for the Confederacy to hold itself fairly beaten; as it would not, the Federal Government determined to subtract the slave element, as far as possible, from the support of the South. The colored race had conducted itself with much discretion, during the conflict, quietly going its laborious way, raising no insurrections and creating no disturbances when nearly all the able bodied whites went to the front. They labored at home, respected the families and interests of their owners, and displayed, generally, their usual docility. This was extremely fortunate for the South, which could thus dispose of all its military force for active warfare, while the negroes raised the supplies for the armies and were employed in great numbers wherever fortifications and earthworks were to be raised.

In September, 1862, it was proposed, by the President, to emancipate the slaves in all the Confederate States on the 1st January, 1863, which was actually proclaimed at that time. The negroes belonging to partisans of the Confederate Government were, therefore, held to be free whenever they came within the Union lines, and were soon enlisted into companies and regiments and employed more or less in army operations, adding considerable strength to the Federal side. This movement gathered force and breadth as it proceeded. Soon, the blacks of the border States were invited into military organizations, with the promise of freedom, by the General Government; the freedom of their families followed, to be succeeded by the final sweeping away of the whole system by the adoption of the Thirteenth Amendment to the Constitution, soon after the close of the war. The conduct of the blacks as soldiers was as honorable to them and as unexpected to the country and the world as it had been while remaining at home to raise provisions for the Confederate troops. This moderation and good behavior in dangerous crises was afterward rewarded, as a reconstruction measure, by giving them the full privilege of citizenship—to the indignation and embarrassment of the South.

During the autumn of 1862, and after the retreat of the Southern army from Kentucky, General Bragg, its commander, lay in Middle Tennessee, not far from Nashville, facing a Federal force under General Rosecrans. On the last day of the year these two armies came to a trial of strength in the desperate and bloody battle of Murfreesborough, or Stone River, in which the general advantage was on the Confederate side during nearly the whole fight of three days, and victory declared, somewhat indecisively, for the Federals only at the last moment. The Union army and its leaders resolutely refused to consider themselves beaten when that appeared actually the case and held their ground, to be justified in the end. It had the larger number, but more of them had no previous experience in their deadly trade. Both parties remained, through the winter, in the same region, defiantly facing each other, but, on the return of weather suitable for military operations, Bragg withdrew to, and through, Chattanooga, and the battle of Chickamauga, near that place, at the end of summer (September 19 and 20), resulted in the defeat or serious check, of Rosecrans, although Bragg was not able to recover Chattanooga. The conflict continued during the winter in Virginia and in Mississippi, with varying results, the Confederate forces, on the whole, maintaining the most important points, frequently gaining considerable advantages, which they were not strong enough to hold with their diminishing resources and the inexhaustible supplies of the Federal Government.

The great abilities and superior armies of Grant, Sherman and others at length triumphed at Vicksburg, July 4, 1863, and the whole river was soon after opened to Federal use. The conqueror of Vicksburg, with a considerable part of his army, was, in the autumn, transferred to Chattanooga, where, in November, another great battle was fought, resulting in favor of the Federal forces. But, although the inevitable end seemed apparent enough to the North, the South, with the most genuine Anglo-Saxon grit, would not see it. The Southwest, away from the Mississippi, was mostly untouched, as yet, by invasion, and the Atlantic coast was still joined to the Valley by lines of railway skirting the eastern and southern base of the Alleghanies. She hoped, to the last, to recover her lost ground, and, in some way, to thrust back the powerful invasion.

The larger features of the war were more concentrated during 1864. At least the antagonists had been schooled by the three years' conflict, and all the desperate valor of a noble race was developed by an opponent worthy of its steel. It required a whole campaign for Sherman to drive the army that had been beaten at Chattanooga to Atlanta, in Georgia, and Grant had not conquered Lee, in Virginia, when he reached the neighborhood of Richmond. Hood, in command of the Southern army, which had disputed every step of the advance from Nashville to Atlanta, in November of this year (1864), suddenly turned back to the starting point. But the superiority of the Federal armies enabled Sherman to pursue his special plans and still detach an adequate force for the protection of Tennessee, and Hood was completely defeated before he had inflicted serious losses in that region.

During all this year, while the bulk of the armies were testing their mutual strength in Virginia and Georgia, under Grant and Sherman, Lee, Bragg, Johnston and Hood, a minor series of conflicts was carried on over almost the whole of the Southern States, both within the Federal and Confederate lines, by detached parties, or small armies, moving with great rapidity. General Price invaded Missouri, General Banks led a Federal expedition up the Red River, in Louisiana. These were both unsuccessful. Mobile was captured and various Federal successes occurred along the Gulf and Atlantic coasts. Federal raids, or detached operations, into the Southern interior were answered by similar movements of small Confederate forces into Tennessee and Kentucky.

Washington itself was threatened by the Confederate General Early, and a desperate conflict between him and Sheridan was afterward carried on in the Shenandoah Valley, in Virginia, resulting in the definite defeat of Early. Federal power was, on the whole, overwhelming, and only a gallantry that took little account of odds until it had fairly exhausted itself could have carried the conflict through so many campaigns. During the winter of 1864–5 General Sherman—after destroying the shops and material for warlike supplies, which had made Atlanta the most important town in the Confederacy—sent a sufficient force back to Tennessee to confront General Hood, removed his hospitals and extra stores to Chattanooga, and left Atlanta with a strong army, and marched through the heart of the Confederacy, 250 miles, upon Savannah, which had defended itself against all Federal attacks from the sea. His route led him across all the lines of communication by which supplies from the Valley could yet reach the armies in Virginia; his large army of well-trained veterans was hopelessly superior to any obstructions which could be thrown in his way by the South on short notice, and his destruction of public stores and railways was an irreparable disaster for it. Reaching Savannah from the rear he easily captured it, and marched northeastward above Charleston, now almost in ruins from a long Federal bombardment, but which had held out successfully to this time. His operations in its rear led to its evacuation. He continued north, through the center of South and North Carolina, the strength of his army, and the co-operation of Federal forces gathered on the coast at various points, rendering all the opposition which the Confederate authorities could bring against him fruitless.

With all the important lines of communication in the Valley in Federal hands, the close of the contest on the Atlantic could not long be delayed. Cut off from supplies and recruits, the Confederate army daily diminished, while the Federal forces were ever stronger in numbers and resources. The conquest of the Mississippi and of the railway lines was a final defeat. The structure of the Valley made the union of the States and sections a foregone conclusion.

Only lines of demarkation which had grown up, like those of Europe, from difference of early history—difference of origin, of language and of political institutions—could permit different nationalities to form on the Atlantic slope and in the Valley. The mountains disappear to open the Valley on the north and on the south. New York, Savannah and New Orleans are equally essential to the interior. The great enterprises of modern life, with a really homogeneous people occupying both the interior and the coast, both the North and the South, render political harmony, such as can only be found under one government, absolutely essential to the welfare of the people. A real union once consummated, interest would make it indissoluble. The Valley is ready to pour out a mighty and exhaustless flood of wealth. It is as essential to their welfare that the East and the South should receive it as that the northern and central Valley should send it. Commercial and industrial forces are the strongest now in operation among men; they are irresistible.

These forces required the union of the whole country that they might reach their natural expression and assume their proper magnitude. In the resources of the Valley lay the securities for the stability of the American Union. The common origin of the mass of the people, and the favorable reaction of the Valley on their character and the direction of their development, coincided with other circumstances. The people were one and their interests harmonious, notwithstanding the difference of labor systems. The result—the victory of the economic labor system and the permanence of the Union—was natural and inevitable.

PART THIRD.

THE NEW ERA IN THE VALLEY.

CHAPTER I.

THE SOUTHERN VALLEY AT THE CLOSE OF THE WAR.

The North had made great sacrifices to maintain the integrity of the Union so far as that could be done by force. No men or money had been spared; the ranks of the armies had been kept full as needed ; a system of extraordinary taxation had been devised and accepted by the people and a vast debt created. The burden had been great ; but, for the time, extraordinary expenditure had stimulated every branch of activity and production; immigration and machinery had taken the place of men withdrawn to the armies, and there was great prosperity, which did not cease for many years after the war.

The South experienced the opposite fortune. With the close of the war and for some time after, its misfortunes seemed to have reached a climax. During the war all the funds obtainable were gathered by the Confederate Government for military expenditure, and little gold, or that which could be turned into gold, failed to be sent out of the country to secure military supplies. For the most part, the cash capital of the people had been in the banks and the Government acquired all the sound values deposited in them in exchange for its paper money. If that government failed its money issues would be worthless. The people burned their ships behind them and staked all on success.

That success eluded them; the Government dissolved without a successor, and as to cash resources they were ruined. The enthusiasm of the people had endeavored to supplement the efforts of the Confederate Government in the support of the army by voluntary aid, and still further reduced their slender resources. Had the blacks remained in servitude the planters could have recovered prosperity in a short time by resuming forms of industry with which they were familiar. Much of their former property had been invested in slaves. The labor they owned was their current capital; some two thousand five hundred millions of dollars had been so invested; it disappeared with the war. Multitudes of the large planters were left penniless and helpless; tens of thousands of widows and orphans, whose property had consisted chiefly of colored servants, were destitute.

For four years war had desolated their lands and cities and very many of their pleasant homes; it had struck down their vigorous men on the battlefield or returned them wounded and broken to helpless poverty, throwing their families into the deepest distress; there were no pensions to sustain the wounded, to smooth their way to health or the grave, nor to furnish a pittance to the dependent women and children. The conquering government would not, indeed, leave them to starve when their cases were known and within reach; but such dependence was a humiliation they, of all others, found it hardest to bear. The land remained and, where the rush of war had not swept, the buildings still stood; but the lands were of little value in themselves now, the houses were bare and decayed from the waste of war or free contributions of comforts to the soldiers during years of blockade, the absence of the master or loss of income.

The loss of personal property in slaves was at least $2,500,000,000. The expense and waste of war, the destruction and deterioration of property must have been twice as much more. Industrial development was arrested in all the South with the opening of the war except in warlike directions. The ground was cultivated for the necessary supplies of food, and some cotton still raised in the hope of getting it through the blockade to foreign markets; this was, in general, impossible, and the country was shut in from the world. War was the great fact and absorbed most of the energies it did not palsy and the resources it did not dry up. Everything was lost that, with an Anglo-American people, it was possible to lose. Their tenacious bravery, for the most part, kept the desolations of actual conflict to the great strategic lines and the regions immediately adjacent, and the interiors remained, as a rule, undisturbed; yet, all that was left was really but a remnant. The desolation was great. The diversion and loss of industrial and business energies and resources, the disorganization that entered into every field of ordinary activity, were equivalent to the entire loss of capital. The small values that remained were counterbalanced by a loss of business habits, by mental and moral depression, and the want of hopefulness that has been the true spring of American progress.

Besides all these losses, which were greater than could easily be conceived in the North, there were many and serious embarrassments to a return of prosperity. Could this population have been placed in a new country with the untamed vigor, boldness and hope of the early settlers of the Valley the difficulties would soon have been mastered. It was not the worst that everything was virtually lost, that the weight of sorrowful memory rested upon their energies. There is a vitality and recuperative force inherent in the race that would soon restore mental and physical tone. The greatest embarrassment lay in the new industrial situation. The subject and superior races stood in antagonism. The necessity of obedience had been removed from the first before the mental change that alone could render it logical and healthy had been obtained. It was impossible that the colored people should not be demoralized, industrially, by a liberty so suddenly gained. Servile habits could not be immediately changed for a wise self-control; they could but be transformed, for a time, into license. Liberty could not mean to them what it meant to the intelligent white; it was, for the mass of them, and for an indefinite time, liberty to be idle, liberty to be absurdly inconsequent and changeable, to be careless of the future and to obey the fancies of the moment.

Thus, there was an inevitable disorganization of any labor system; the blacks remained, but in a condition singularly embarrassing to the resumption of profitable industry. The impossibility of a sudden mental revolution among the whites, all whose habits had been based on absolute control of the laboring class, added to this difficulty. It seemed an absurd situation. Chaos was come again. The mode of reconstruction adopted by the General Government required the new prosperity of the South, however, to be built up in harmony with these conditions. The Southern people had no power of control; they could not restore former relations; the principle of equality as citizens must be regarded.

The abolition of slavery became constitutional by the Thirteenth Amendment, at the close of 1865; the Civil Rights Bill became a law in the following year; the Fourteenth Amendment went into operation in 1868; and in 1870 the Fifteenth Amendment conferred the elective franchise, or right to vote, on the colored people.

The Southern people must begin anew, contrary to their habits, to their judgment, and, as they were situated mentally and industrially, to their interests. They were disfranchised for the time, lest they should exert industrial and political control and interfere with this transformation of the colored race from servitude to citizenship. So great a change, on so large a scale and in so short a time, had never before occurred in human history. It had been believed impossible. A war of races had been predicted. It had not been thought that there lay in humanity the capacity to endure a change so vast and sudden at once. All history and logic protested against it; but the Government was inexorable. The Southern people submitted, as a whole. They had the chief miseries to bear, the principal sacrifices to make, and must be considered as having done high honor to themselves, to the Anglo-American race and to human nature.

The most disagreeable features of the situation for the Southern whites continued from seven to ten years in the different States, according to their progress in political "Reconstruction." At first it was a general military occupation, during which civil government was gradually organized under the supervision of intelligent army officers. Their sense of justice and sympathy for misfortune softened some of the harsher features of the situation, for the time. As soon as possible, military rule ceased and local government was conducted by the classes considered loyal to the General Government. These included a small minority of the Southern whites; Northern people newly settled in the South; officials of the General Government; and, soon, of the new citizens of African descent.

All these classes had interests more or less antagonistic to those of the great body of the Southern whites who had formed the ruling class before, and during, the war. The true Southron inevitably felt more or less contempt, aversion and hostility to those whom he regarded as the usurpers of his rights. Many of influence among these new rulers were neither very wise nor very virtuous, and sometimes their legislation and finance were really an outrage on the general public. Yet, acting under Federal and Congressional inspiration, they gave the necessary new cast to Southern institutions and forms of government by the adoption and inauguration of new State Constitutions. The colored race came into power under the guidance of Federal officers, of the Freedman's Bureau, and of Northern teachers and settlers.

It was natural that many unwise things should be done by these inexperienced rulers and that the people of the South should feel much of secret sorrow, shame and rage, if it was not openly expressed. In general, they endured what could not be helped in silence and waited for better days. Some scenes of violence occurred, some murders were committed, and ill-feeling, though generally suppressed in its more violent forms, rendered all parties uncomfortable and apprehensive; yet, on the whole, the Southern people endured with very commendable patience and self-control. It was the most humiliating, painful and difficult period for them. Yet it soon passed, and various experiences taught them that there was more hope for them in their own land, with all these miseries, than anywhere else. Some, at the close of the war, believed that they could make a more endurable future in Mexico, South America and other foreign lands than in their desolated and ruined country. Some years of experience, however, showed them that nothing was to be gained and much was to be lost by these self-expatriations, and no general emigration was organized. In the course of years most of these emigrants returned and accommodated themselves cheerfully to the new situation.

At the close of the war, and for some time after, these distressing features of the situation predominated. Many a matron, accustomed to superintend a large household of servants, but unfamiliar with manual labor, was reduced to the necessity of caring for her family unaided. To unusual toil was added the unskillfulness of the beginner, adding doubly to the physical and mental strain. Delicate women, accustomed to affluence, and tenderly nurtured children, were thrown, by thousands, on their own resources; their natural supporters and guardians having perished on the field of battle or in the army hospital, leaving no income behind for their support.

Many a gentleman born to wealth and ease found himself face to face with absolute poverty, without habits of labor, with no knowledge of a profession or handicraft from which he might draw a support for himself and his family. A community where all are accustomed to take an active part in bearing the burdens of life, where personal labor is the rule, would bear these losses with tolerable equanimity. At least their past habits would be an aid, and not a bar, to recovery. It was impossible for the people of the North to realize the extent and severity of such a weight of calamity among communities where social and industrial life had been organized so differently from their own.

The Federal Government was conducted almost exclusively by the North—at least the great majority of the party in power were from the free States. The success of the Federal armies was, to them, but the first step taken. The future must be secured. They had prevented disunion; they must now take care that it should be forever impossible. They therefore elaborated a plan of reconstruction with an inflexibility that could not but seem ruthlessness to the impoverished South—it would perhaps have seemed so to themselves could they have been able to realize fully the Southern situation in detail. With the cessation of resistance they ceased shedding blood and confiscating property, and in those respects showed a moderation not often recorded in history; but they were all the more unyielding in carrying out the system of reconstruction they had adopted. The character of the instruments they employed in the South, and the brief time allowed for the most radical changes, greatly intensified the misfortunes of the Southern people for the first few years. These, however, were borne so wisely by the mass of Southern whites, and they accommodated themselves so soon to the new situations, that a new era of hope and prosperity soon began to dawn on them.

CHAPTER II.

CHANGES IN THE SOUTHERN VALLEY AFTER THE WAR.

Institutions truly democratic leave a very large liberty to individual activity, which often appears, in formative periods, to threaten anarchy. There seems to be no adequate restraint to ambition and passion, and irregularity, disorder, and sometimes violence, become the predominating features on the surface of society. But all American history has shown that beneath the surface were conservative elements of so much vigor that only a short time was required for them to master the disorder, and that they could do this more naturally, completely and in a shorter time, than a system of external force.

The treatment of the Southern whites was now in strong contrast with the theory of republican equality and it could be maintained only as a temporary measure. The principle was as odious to the North as to the South, and was designed to be abandoned as soon as it became evident that the permanence of the Union was no longer threatened. A large minority in Congress unceasingly protested against the system of reconstruction adopted by the majority and so rigorously applied. That system was chiefly embodied in the three Constitutional Amendments securing citizenship and its rights to the colored race, and when these were definitely accepted by the South coercion was to cease.

In actual fact, there was very little military force applied in the South after the dispersion of the Confederate armies and Government. A few thousand troops were scattered over the vast territory where, at first, they merely did police duty and acted as civil agents of the Federal Government. Soon they were withdrawn from all but the most prominent central points, where the smallness of their numbers made them little more than a moral force. Self-control had become so habitual to the American that no occupation "in force" was required in the South—no military police answering to the "gensd'armerie" of the monarchial governments of Europe. There was virtual freedom of personal movement, and absolute freedom from espionage. Notwithstanding the bloody war and the deep antagonism of principle and sentiment still existing, the two sections understood and trusted each other to a degree unparalleled in history. Nominally, there was a Federal army in the South and its political destiny was in the hands of Congress. Actually, the South was left to reconstruct itself, provided it would respect the three new Amendments. Political disabilities were very soon removed from the mass of the white population. They generally held aloof from political action where they must see the institutions among which they had been born and for which they had fought overthrown. They, in general, quietly turned away until the change had been wrought by other hands.

There were scenes of violence, of bloodshed, of desperate revenge on the new-made citizens, colored office holders and Northern teachers; but these were not properly the acts of the Southern people. They were, usually, in isolated communities largely composed of the rude and uncontrollable classes of society, or by desperate characters who improved the opportunity to commit crime under the shield of political opposition. These acts were truly disapproved by the mass of the Southern people.

The native good sense of that people soon recognized the wasteful and undesirable character of the slave-labor system and felt it to have been a mistake. Irritation at the elevation of the ignorant black to citizenship continued longer, but, in the course of years, this gave way so far as to permit their general return to the political field of action, where they employed their diplomatic abilities in the effort to secure the colored vote to their own side.

Thus, republican habits and traditions interposed to temper the violence of the changes produced by the war—to moderate the arrogance of the conqueror, and preserve a large portion of freedom to the conquered—from the first, as well as to moderate the conduct of those who had lost their cause on the battle field. They renounced a revenge which must be futile, and more injurious to themselves than to any one else, and soon proceeded with vigor to the work of reconstructing their fortunes and exerting all their influence on their local government. The way was prepared, very soon, for a much better political situation and, gradually, the industrial and financial condition of the South was ameliorated.

The colored race also soon began to illustrate the beneficial influence of personal freedom. The moral and industrial vices of the labor system of the South so long held the attention of the civilized world, and especially the dominant party in the North which took control of the General Government at the opening of the war, that some other phases of the case were quite overlooked. It was, therefore, a matter of great surprise to the country when, on the outbreak of the conflict, during its whole course and when they became the dominant political force in the South after it, the black displayed a singular degree of mildness and moderation. There was no frenzied outbreak of savage revenge when a large part of the Southern planters and the flower of their young men hastened to the armies, leaving the weak and defenceless in the care of their servants. The conduct of the blacks in Hayti and Jamaica on their attainment of freedom was not repeated. The three or four million slaves in the Confederate States calmly waited the hour when they should be legally freed, in the meantime doing their full duty to the lands and families of their masters, left in their care. No insurrections, no murders, prejudiced their prospects. It was not cowardice, or stolidity, that kept them quiet. They generally understood that the hour of their freedom was approaching, and when, in the later years of the war, they were mustered into the Federal army by tens of thousands, they proved good soldiers. The Southern people themselves had not expected from them so much good sense, patience in waiting, or valor in battle.

These blacks had for ancestors, but a few generations back, the most barbarous and degraded of the negro tribes of Central Africa. It had been the severest charge of Christian philanthropists in the North that the Southern people held them aloof from all elevating influences—that their system, which held them as property, tended to dehumanize what remains of manliness barbarism had left to them. Yet, when the severest test was applied to them, their conduct would have done honor to the most civilized people in Christendom. The conclusion seemed to be inevitable that the influence of their masters had not done them the harm assumed. Their contact with the well-ordered civilization of America had ripened them into men of a higher order than their African ancestors. If, in many respects, they remained ignorant and stupid, in others, they had been educated to a manly self-control and a high degree of good sense. This result is extremely honorable to the Southern people. *Force of character* in their masters and general contact with them through generations had developed much of essential manhood in the enslaved African. It can not be regarded as an argument for slavery. A forced labor system is an economical, a social, and a moral heresy; yet, in this case, it had its palliatives. It held a barbarous race, with a strong hand, in steady subordination to, and contact with, a highly civilized and enlightened race, until many of its virtues had been acquired.

After the first confusion, and repulsive antagonism, of a forced liberation of the colored race among their former masters had passed, the excellent qualities of both the whites and the blacks began to manifest themselves in a steady and rapid improvement of the situation. They adjusted themselves to each other under the new relations better than could have been expected. Not all were prudent and free from senseless passion and violence—but the general masses, on each side, displayed their best qualities to each other and made the best of their new relations. The steady improvement manifest in almost every form in the South for the ten years following 1868, and the general quiet that reigned through its communities, admit no other conclusion. The occasional local difficulties that occurred, and that seemed, to one outside, symptoms of a general convulsion, proved to be so few, so limited in range, and so dependent on outside interference and political contests for their existence, as to prove the rule in the most striking manner.

Under this general reign of good sense and moderation the waste of war began to be rapidly restored. The newly created wealth was more equally distributed and produced vastly more general comfort. While the great fortunes of the periods before the war were seldom regained, a large number reached a condition of modest abundance and prosperity. Many of the colored people acquired property and raised themselves to positions of respectability and influence. Small farms and a healthy variety of industries gave evidence that the natural laws controlling the activities and interests of man were in full play and were operating wholesome changes. The absolute necessity of general industry to save themselves from want called out much of the latent energy of every class of the people, white and black, and began to introduce the respect for honest toil that had before been more largely rendered to it in the North, while active employment helped to banish the excessive fervency of regret for what had been lost. Thus, there was a growing intensity of light in the Southern picture.

There were, indeed, many shadows that were extremely vexatious, they seemed, to Southerners, so unnecessary—the result of interference by the General Government, and by associations and private persons from the North interested, really or ostensibly, in the welfare of the freedman. It could not be expected that this interference, when conducted with the greatest care and judgment, could be looked on with approval by the South; and it was not always wisely made. Unscrupulous and selfish men sometimes took advantage of the political powerlessness of the whites and the general confusion that too easily concealed irregularities, as well as of the ignorance and too great confidence of the blacks, to carry out measures more or less harmful. Misunderstandings, political partisanship and private passion often interrupted, for a time, in various localities, the growing prosperity. Sometimes conflicts arose in which blood was shed; but these outbursts did not so far receive the approval of the Southern people as to be supported, or prove capable of growing to serious proportions. They, as a whole, submitted to the authority of the General Government and endeavored to make the best of a painful situation. It was only individuals, or really small minorities which happened to be strong in some regions, that created disturbance. The Southern public, in general, patiently waited for the time when it could legally set right what it saw to be oppressive and wrong, thereby proving itself fairly worthy of a restoration of all its powers as a body politic in the Union.

Northern sympathy and humanity at once came forward to assist in the relief of Southern distress, even before the fighting had wholly ceased; and the prosperous activities that had been maintained in the free States during all the mighty conflict were prepared, at its close, to enter the South and assist in its restoration. Northern wealth flowed, through many business channels, into the unfortunate States and helped their industries to reorganize. Old merchants and planters resumed the relations with factors and capitalists in the North which had been suspended during the struggle, and obtained the credits indispensable to the re-commencemt of business.

The North and the South probably respected each other even more after the war than before. However they might differ on political and social questions, they each privately honored the other with the esteem of countrymen and brethren, where only business or personal relations were in question. Business interest is of no party; northern capital at once flowed South for investment, and thousands of enterprising Northern men sought to establish themselves where less competition in their own line of activity promised them larger gains. This prejudice gradually gave way, painful memories grew dim, and the future became more and more attractive. The most valuable resources of the Southern States had not been developed, to any great extent, under their former labor system, and a great, a new, future was before them. The North had an interest in this thorough development of Southern regions second only to that of their own inhabitants, and every opportunity for profitable investment was quickly improved.

Thus, money immediately began to circulate in the South, manufactures before unknown there were established, a market for all its common and rarer productions was very soon found. Material prosperity restored the dilapidated cities, the waste places began to bloom, railways multiplied, a hitherto unknown bustle and activity was noted, and the sorrowful memories of the past gradually retreated before a new prosperity, new hopes and fears.

The pledge of a speedy and complete recovery from all the evils and misfortunes, in which the close of war found them plunged, was in the character of the Southern people. The very immensity of the misfortune had sprung from the force and tenacity of that character; and one of the distinguishing traits of the Anglo-American—one which had placed his country, in three quarters of a century, in many respects, at the very head of modern progress—was his flexibility. United as it was with intelligence, with resolution and perseverance, it made him superior to all situations, fertile in expedients for surmounting difficulties in the wise and practical way habitual to the English and their kin.

This power of accommodation to circumstances, joined with force of character and the strong and broad good sense peculiar to Americans in general, was never more conspicuous in the race than in the Southern States during the ten years following the close of the war, but especially in those following 1870. To accept their former servants as freemen and citizens, to accommodate themselves to a new labor system, to become capable masters of free laborers, to convince them that they were their real friends, and to assist them to a wise use of their newly gained rights and privileges, was a supreme effort *for them.* The situation having been forced on them contrary to their will and judgment, they had *themselves*, as well as other numerous and great difficulties, to conquer.

This effort was substantially crowned with success at the close of the last of the three presidential terms, of which the first commenced in the spring of 1865. It was naturally impossible for a free people, possessing traits of character so marked and vigorous, to so far forget their own dignity as to yield their principles to anything but conviction, and they were very naturally repelled from the lesson by the manner in which it was set before them for study. It had, however, been studied with careful thoroughness and mental change produced changes in all other forms. At that period the National Government was so well satisfied with the spirit manifested by the Southern people as to withdraw all signs of outward pressure and want of confidence in them as loyal citizens of the Republic. They had already, at various times, resumed the political management of their own States and local affairs, and were now as completely free from outside control as the Northern people. Such a result required, and had been gained by, the co-operation of the North and the South, the whites and the blacks. Their mutual efforts laid the foundation of a perpetual Federal and National Union, rendered the more secure that the vexed questions of the past were, in real truth, forever put aside. The political rights and liberties of the colored race were now guaranteed by the Constitution of the United States, and that guarantee had received the sanction of the white portion of the Southern people.

If the foregoing statements, when made, seemed often too definite and positive, and to ignore some aspects and circumstances of Southern life which deeply impressed a part of the Northern people, it was because of the extreme difficulty, even to an enlightened and fairly impartial mind, of so overcoming the want of an intimate and life-long acquaintance with the inhabitants of another section as to be able to judge, with exact discrimination and justice, the exceptional incidents and acts of violence that occurred, from time to time, in Southern society. A murder in the South was liable to be noticed with more care and to be interpreted more unfavorably, to be suspected of a deeper political significance, than one occurring in a region more familiar, and with whose general social, political and moral tone they were fully acquainted. Great changes were passing in the general mind and feeling of the South. In the other sections the degree and quality of these changes were not fully known nor easily appreciated; the explanation of the Southerner, who alone was fully prepared to judge them, was regarded with suspicion as probably partial or partisan.

To most people a really accurate and impartial judgment of events and persons of their own generation is impossible. The perspective is not sufficiently extended; the view is too close; the reach of vision too narrow; some of the important relations to be considered are too imperfectly known. Besides, events sometimes admit of various interpretations, and time alone can prove, with absolute conclusiveness, which is right. The Southern people have erred in various ways, they have suffered and lost much more than most people outside of their own section can well appreciate, but they have re-conquered a lost prosperity and nationality in a remarkably short space of time. As a section they have proved their right to be considered real and true Americans.

Constitutional changes, embracing all the features insisted on by the General Government, had been introduced when the States which had formerly been members of the Confederate Union were re-admitted by the Federal Congress. These re-admissions of Southern States commenced, in the Valley, with Tennessee, which conformed its Constitution to the circumstances by a Convention whose action was approved by the people of the State, March 4, 1865, and the Legislature and Governor, appointed under it, having approved the Thirteenth and Fourteenth Amendments to the Constitution of the United States, July 12 and 13, 1866, the State was formally re-admitted by Congress on the 24th of the same month. Missouri and Kentucky were not held to have left the Union. Arkansas, Texas, Louisiana, Mississippi and Alabama were formally admitted to representation in Congress, at different times, between 1868 and 1870. The votes of the Freedmen being received in the appointment of delegates to Constitutional Conventions and the ratification of the revised instruments, the Southern whites took little part in them, although proclamations of amnesty had restored the civil rights of the masses of the people.

Most of these new Constitutions formally abolished slavery, denied the right of secession, and forbade the acknowledgment of debts contracted by the Confederate Governments. Some of them were subsequently revised and omitted any formal statement of these points, but left out the word "white" in determining the qualifications of voters; the provisions of the Federal Constitution, binding on all the States as the supreme law of the land, sufficiently securing the other points. The Constitution of Kentucky remained the same as in 1850, although some of its provisions were made obsolete by the amendments to the Federal Constitution. Most of these States made provision in their new Constitutions for an efficient common school system of education, which included the colored as well as the white population, and the State Governments proceeded, as soon as practicable, to put them in operation. Many millions of dollars, in the course of years, flowed in from the North in support of educational enterprises of various kinds, and a new source of promise and hope for the future of the South was opened.

One very unhappy accompaniment of these Constitutional and Legislative changes was experienced. They were suggested by the Federal Government but conducted, in large part, by Northern people who were either imperfectly fitted for that task by want of familiarity with Southern interests, or dishonest and heartless enough to make personal advancement a principal aim. They took advantage of the ignorance of the colored people and the helplessness of the whites to plunder the painfully gathered public funds, when, of all times, it was most harmful to the desolated States. It was one of the cases of disorder in which superior authorities did not feel at liberty to interfere, since, nominally, the State Governments were re-established and Federal power could occupy itself only in its restricted circle, unless called upon to keep the public peace ; therefore freedom of individual action and respect for constitutional limitations, combined with antagonism between the white and colored races in the South, to open a large margin to possibilities of harmful action. It is a peculiarity very noticeable in various periods of our history. The mode of its cure illustrates a favorable feature of American life.

It could only be effectually corrected by the Southern whites; and, in proportion as the evil afflicted and injured them, were they inspired to earnestness in the effort to gain the confidence of the colored voters, at least of a sufficient number to give them control of State Governments. In this way the evil would work its own cure. Years of painful contest were required, indeed, to bring this adjustment to a conclusion, involving much bitter party strife, with occasional acts of lamentable violence; but it was steadily pushed forward by the interests involved, until the extension of the evil was stopped and its effects gradually modified. Though extremely hurtful and discreditable, it was terminated in a natural way by the free operation of the orderly and sensible spirit of the people themselves. Freedom is, at times, turbulent, but effectually corrects its own errors.

Thus social, political and industrial reconstruction went hand in hand. The violence which had required it left the South bleeding at every pore and surrounded with the ruins of her former prosperous greatness. Gradually her wounds were bound up and healed; the fever of passion passed away from both North and South; a long convalescence followed, but was ended by the return of rugged health, sounder and broader principles of policy, and the elements of a more perfect union between the sections of the country. The time was soon to come when the parties who had met in deadly conflict on the battle fields, which they had left strewed with the noblest and best of their fallen braves, could meet on the same fields, to mourn together over the losses of each, and mingle their tears in mutual sympathy and respect. They had learned to know each other on a thousand battle fields, to esteem their common country more highly because each formed part of it, and had clearly ascertained how their various interests could be reconciled. The fearful price paid for the Union re-established and more perfectly consolidated, and for the removal of all the great causes of discord, was not too great if there were no other way of accomplishing those ends. Strong races must needs have strong faults. Their errors are, occasionally, as disastrous as their character is vigorous; but human life was not arranged to exclude error, and, happily, this generous race was capable of "learning wisdom by the things it suffered."

CHAPTER III.

THE UPPER VALLEY DURING THE WAR.

The people of the Southern Valley had lost about four fifths of their property during the war, and found numerous and great embarrassments, at first, in their efforts to employ the remainder as an effective base for the recovery of prosperity. In addition, they had lost much of their best and most energetic population, and the stimulus of lively hope. Dark clouds lay on their future, gloom rested on their minds, and discouragement sapped their energies. On the other hand, the inhabitants of the upper Valley had gained, at least, as much as the war had cost them, and invested it in important and valuable improvements that would pay a large interest in the long future. General prosperity attended them during all the desperate struggle—after it had been taken into the account as an unavoidable fact.

Although they had formerly been largely dependent on the river system for transportation, the railroads had delivered them from it after 1850, and their activities were scarcely embarrassed, after the first year of confusion, by the blockade of the Mississippi. Their chief trade had come to be with the East, and with Europe from eastern ports, and the requirements of the armies had made up the loss of Southern sales. The West had sent about a million of its able-bodied men to the armies that were making such havoc in the South, and was receiving good pay from the Government for feeding them there. Their places were partly supplied by immigration, for more than 550,000 foreigners had come into the North during the four years of the war, and a large part had been attracted to the West by its prosperity and the large wages paid to laborers. The remaining loss was more than met by the increase of labor-saving agricultural machinery. The free circulation of money had given all the stimulus required. Development had been uninterrupted, and perhaps greater than if there had been no thunder of cannon or rattle of musketry from Kansas to the Potomac. When the war closed, therefore, the West had never been so prosperous. The public debt, which had put so much money in circulation, would make itself felt in the future, but, for the present, the preservation of the Union and the general extreme prosperity were the prominent facts.

During the war about 1,500 miles of railroad had been built in the northern Valley—about as much as the length of one trunk line from the Atlantic shore to the Mississippi. Four great lines, with innumerable feeders, extended from the center of Iowa and Missouri to eastern tidewater, besides the water route of the lakes and the Erie canal. These transported the stock, the pork and the grain of the West to the best markets, as well as transferred the munitions of war and army supplies. No cordon of armed vessels beleagured the Atlantic ports; no international law prevented free intercourse with the world beyond the ocean, and profitable trade and commerce went on as usual. It was well for the North that this ample outlet had been put in good working order before the breaking out of the conflict. By it she had full command of all her resources and could take full advantage of the openings for traffic and the profusion of money.

Machinery for conducting agriculture over the smooth areas of the northern Valley, whereby multitudes of men could be spared, had already been invented and introduced before the war, and many establishments for multiplying them had been constructed even as far west as the Mississippi. To press their production and dispersion over all the prairie States was easy. Frequently one man could do the work of ten, by their help, and there was, therefore, ample opportunity to raise all the food that could be sold. The increase of manufactures everywhere called for larger harvests every year; the great consumption and waste of war increased the demand, and foreign export continually increased. No class of the people were more prosperous than the farmers—except the army contractors. It was a most salutary fact and helped much to lay a base for the future and to offset the demoralization inevitable in a state of war. The prosperity of this class, and the necessity of manufacturing for them, invited the establishment of that industry on a larger scale, in the West, built up the cities and towns, and furnished millions more of artisans to be fed at home.

The creation of the greenback, or Government money, was one of the important circumstances of the situation. It gave a vigor of life and activity to all kinds of business that otherwise must have felt the impoverishment of war. As it was, the extraordinary resources of the Valley were drawn out, profitable trade was maintained, the money was scattered far and wide to benefit every class of the people and stimulate every kind of production. The actual gain in capital, and in preparation for future production and a higher degree of prosperity, must have been fully equal to all the immense expenditures of the war.

Thus, when the war closed, everything was ready in the North for an unexampled spring of progress. Skilled mechanics and laborers, in every branch of manufacture, had been gathered and trained; farms had been put in the best order; careful organization of all branches of business left no time to be wasted in preliminaries; and the temper of the people was at the right pitch for the production of the greatest possible results. It was as fine a situation, as full of hope and promise, as that of the South was sad and dark.

Nothing could show more impressively the advantage of a free and intelligent laboring class, than the strong contrast here suggested by the condition of the sections. The unhappy South drank the dregs of the cup of confusion and trouble that a false and illogical policy had poured out for her. Had the Northern people lost all, as the Southern had done, they would still have had the skillful hand and intelligently trained muscles of their laborers to re-create capital. These would have been of more value to the South than thousands of millions of money.

CHAPTER IV.

THE NEW STARTING POINT.

It is seen that war had wasted only the South, drained it of capital and left it helpless; while the most that had been spent on armaments and supplies had tended to assist and enrich the people of the North, and especially those living in the Valley.

The new starting point presented features of promise more inspiring than had ever before smiled on that region. The extent and variety of its resources were evidently so great that no conceivable disaster could really interrupt, or seriously check, the progress of its people. It could sustain the loss of hundreds of thousands of its best citizens without losing the momentum of industrial advance; it could meet every possible demand for its productions which could arise in the country or come from foreign lands; it could so sustain the credit of the whole country by its boundless possibilities that the waste of three thousand millions of treasure could be borne with little difficulty; it could, perhaps, replace them by its surplus earnings while the shock of armies and navies was causing the whole continent to tremble. The war was a singularly triumphant test of the ability of the country to stand any strain, to meet any possible call. At the close of that mighty struggle all the channels of its industry and trade were full to overflowing, ready to spread out over the devastated South, and to employ all the abilities and facilities that had been occupied for years in the armies and navies of the nation. No soldier and no ship need fail of full and profitable opportunities for such service as their soundness could render. It was discovered to have the widest margin for "profit and loss" of any country under the sun. This was the base for its new start.

Up to this time the more prominent feature of Valley history, as a whole, had been that of laying foundations, of making commencements, opening new farms, building new towns, establishing new industries. This feature did not cease; for over all its settled areas and around all its northern and western margins were virgin lands to be broken for the first time by the plow, openings for new activities and an indefinitely greater population. The filling up and extension might, and did, continue as actively as ever; but it became a subordinate, it was no longer the leading, feature. Development from the beginnings already made became that leading feature. The Valley was now ready to penetrate beneath the surface, to ascertain how deep were the treasures whose "first fruits" had proved so rich. The more absorbing topic was how to improve methods in farming, in manufacture, in trade, and organize its instruments of wealth so as to produce more largely at less cost. The prospecting period had ceased, the time for productive labor had come; running hither and thither to make trials comparatively ceased during the war, when the disturbed condition of the southwest, and the smaller number of unattached individuals rendered a steady development of the farm, the trade, or the manufacture already open more profitable.

The people of Ohio, for instance, no longer, as in former years, poured over its boundaries by hundreds of thousands yearly. They staid at home to make the most if their opportunities there. The stalwart sons of Kentucky and Tennessee staid at home to repair their desolations and create new sources of gain to replace their losses by war and emancipation—and so throughout most of the States. Ohio had steadily reduced its State indebtedness per head of its population during the war. In 1860 it was $6.09 for each of its population; in 1865 but $5.13, notwithstanding the vast contributions made, under various forms, to the war fund; and its Auditor estimated that the whole debt might easily be extinguished in seven years, while its grand career of public prosperity seemed but just begun. Similar features, modified by various circumstances but testifying to the same great facts, characterized all the States of the Northwest. The innumerable springs of prosperity that had been gushing forth from the whole surface of the West during the last fifty years were now gathering into a mighty river, broadening and deepening with every stage of progress.

The situation was improved by the new national enthusiasm developed by the victories of the war and the new sense of unity and strength in the Republic. The institutions established in the Valley had been subjected to a powerful strain and had manifested no sign of weakness but had rather settled more firmly into place. The test seemed to have been a benefit, rather than an injury, and the future could be faced with an absolute confidence. The element of weakness and dissension that had seemed to be forming two nationalities in the Valley was definitely removed, and, sooner or later, the agencies set in operation after the war must harmonize the population of the upper and lower basins in their feelings and sympathies. Soon, the wealth and prosperity of the upper branches of the great river must follow the course of the waters and enrich all the South with their golden flood. There was a stimulus to hopefulness in this prospect which could not but react with immense power on the struggling energies of all the States; inclining the South to courage, the North to sympathy, forbearance and generosity; and altogether to united counsels and vigorous effort. The future gave assurance of restored prosperity to the exhausted South, of increased gain to the alert and enterprising North. The "manifest destiny" of the great nation, of which the Valley included so important a part, was henceforth quite certain and all its citizens felt themselves girded up for new and more arduous undertakings.

All this had been felt by the North and the Federal Congress during most of the war and was one of the secrets of its success if not, indeed, the principal cause of their constancy and vigor in pressing it. The failure to realize this grand future was a possibility which the people and their representatives would not take into account; to secure it they considered no sacrifice too great, and felt almost as sure of the ultimate success of the Federal arms at the beginning as at the close of the conflict. This idea united the mass of both the great parties, regardless of the protest of the minority, and their naturally generous sympathy for the invaded and bleeding South.

The war was fought to a successful conclusion to realize this idea, and, having secured that end, the impulsive force springing from it naturally gathered weight and led the section which had triumphed to cherish, more heartily than ever, its patriotic dreams of future greatness. It was sensibly drawing nearer to the aim of its hopes. Nor could the South long remain insensible to the attractions of that hope. It had dreamed in vain of a separate nation. Now that the dream was dispelled so rudely and completely it must discover that it had much misjudged the antagonist that had triumphantly overcome a heroic resistance; must presently see that such wealth of resources, such manly vigor and capacity, were the allies it needed. It must comprehend that this reality was far better and more promising than the dream of an empire built on cotton and the negro; and, dismissing its dream with a sigh, perhaps, would address itself to this beckoning hope. This substantially occurred. The idea of recovering slavery, under any form, was immediately given up in answer to the earnest wish and fixed resolve of the rest of the nation; in its discouragement and poverty it was inspired by the grander views that began to smile from the future and the situation was improved by the beginning of a new and more perfect union between the sections.

When the armies were disbanded in the spring and summer of 1865, they returned to their homes inspired by these bright visions, to aid in making them a reality. So filled were the released soldiers of the Federal Government with this patriotic enthusiasm that they displayed very little of the inevitable demoralization of the camp, and quietly resumed their places in the office, the workshop and on the farm, as if only returned from a journey. A powerful impulse within and about them carried them back to their accustomed life, and the demoralization was manifest chiefly in the looser notions that ruled, for a time, in public and business life, and in the impatience and hurry generally felt to realize their personal aims and wishes suddenly, and with too little heed to the means employed.

This promise of the future and absorption in active labor was the escape-valve for the passion and excitement brought from the army, and for the excessive ambition which flush times and great prosperity had encouraged among those who had remained at home. In due time it would be chastened and controlled by the good sense of the general community and the public reprobation it would not fail to receive.

The Southern soldier, who had shown himself the bravest of the brave—for no test of bravery is more decisive than that displayed in support of a constantly failing cause—being overpowered and disarmed, experienced, to some extent, a very natural reaction, and a longing to attach himself to ideas and occupy himself with deeds capable of succeeding. He returned to build up the wastes and repair the ruins of the desolated "sunny South," penetrated with respect for his fellow of the North whom his utmost valor could not overcome or weary, and, perhaps, even more disposed to re-embrace the cause of the promising country capable of inspiring so much tenacious patriotism. After all, it was *his* country and he was not shut out from sharing its glorious destiny. He would soon come to discover that the real resources of his beloved South were wasted and overlooked by the former system, and that free labor and a more varied and intelligent industry alone could develop it and give it proper rank in the Union.

With the return of the army to productive and business life higher ideas obtained full sway and a period of more vigorous execution in all the lines of development opened. The war was a practical education of the people, who perceived more clearly what they wanted, what they were resolved to have, what was possible and how it was to be obtained. From this point commenced a new growth, a new vigor of pushing the old lines of growth, and a new sense of capacity.

A new era opened to the Valley and to the nation, in the year 1865, and the first ten years of this era would leave the situation so improved, old evils so forgotten, and the scars of battle so nearly covered that the renovated nation would hardly be able to put itself back, in imagination, in the position it had occupied fifteen years before. It seemed a dim, distant, and almost impossible past.

CHAPTER V.

VAST EXTENSION OF THE RAILWAY SYSTEM.

The first thing to be done to prepare the way for a new era of vast development in the great Valley was to complete the Railway System so as to render access to its treasures and remotest localities from the Eastern and Western seaboards easy, speedy and cheap. The Railway was the true providence of the Valley. Its products were found to be so vast and so easily obtained that water transportation by its systems of rivers, lakes and canals was wholly inadequate long before the latter were completed. Corn, transported more than 125 miles by ordinary roads, loses its value, or profit, even when it may be sold at 75 cents per bushel; and wheat, at $1.50 per bushel, can be profitably transported only 250 miles. Residence at any considerable distance from places of shipment by water took all profit from the heavy products of the prairies. When the water courses were most wanted they were frozen up; delay by accident, and frequent losses, required a high rate of insurance, and with only facilities of transportation by water the progress of this rich agricultural region must be painfully slow.

The transportation of freight by railroads commenced on a grand scale in 1851 and soon came, by its cheapness, to increase the value of the products of the Valley *one hundred and sixty times* over that which they bore when required to be transported to market on ordinary roads by land. Thus between 1850 and 1860 the gold mines of California opened a far richer mine in the West and furnished the North with the "sinews of war" for the four years' struggle.

Railways enriched the South much less than the North, chiefly owing to its different industrial organization. Its inability to develop its equally great sources of wealth except in one direction, for want of an intelligent laboring class and a variety of pursuits, left it far behind when the strict comparison was made in a long and vigorous war. Yet, it was by means of its railway system that it was able to maintain a desperate resistance so long. When this system was broken up by the conquest of Chattanooga, Atlanta, and Sherman's raid through Georgia the members of the Confederacy were severed and its destruction inevitable.

During the war comparatively little was done in railway extension. About 1,500 miles had been built during the four years, in the northern Valley; but for the next five years the system was extended greatly, averaging 2,000 miles a year for the whole Valley, or 10,000 by 1870. In the next four years the increase was more than 12,000 miles in the Valley, and the whole increase outside of it for the ten years, a large part of which was, directly or indirectly, tributary to its prosperity, was about 20,000 miles.

The value of the merchandise transported over all the railways of the country in 1870 was *six times* the amount of the public debt, and had increased yearly, after 1865, on an average of over a thousand million dollars, or one half the war debt, and the earnings of all the roads were about one fifth of that debt yearly. All the railways in the country, in 1870, had cost, for building, about one thousand five hundred million dollars, and it has been affirmed that the increased value they gave to property—or the wealth they created, as it is said—equaled that sum the moment they were completed—that is, their existence restored, to the full, the capital invested in them. They increased the capacity of the Valley for development perhaps two hundred times. We quite lose ourselves in these immense estimates; but the new nation found itself in the vast wealth which immediately flowed through all the channels of commerce, business and industry, and, while constantly lightening the burdens of taxation, was able, in ten years, to pay off more than one fifth of its war debt.

While yet the war was in progress the prophetic spirit of the people, their unbounded confidence in the great destiny awaiting the re-united nation inspired them to lay great plans, the accomplishment of which had been before considered as vague possibilities of a distant future. In 1863, while the war was at its height, the Pacific railway was planned. This was to complete the railway connections between the two oceans. In 1865 about one hundred miles of it were completed; in 1866 three hundred were open for use; three hundred in 1867; eight hundred in 1868, and the remaining three hundred in 1869. The importance of this enterprise was even greater politically than commercially. It was continuing, and irrevocably confirming, the idea of indissoluble union—of an undivided nationality. Its economical result was to hasten the growth of Nebraska and Colorado, on the western borders of the Valley; to facilitate the working of the precious metals in the broad ranges of the Rocky Mountains; to build up the ports and the commerce of the Pacific coast, and to bring China and the trade of Eastern Asia practically nearer the Valley by more than two thousand miles. Besides this, the moral effect of success in carrying through, in so short a time, the greatest undertaking of *any* time was, possibly, greater still. The American could think few things impossible after this experience and that of the war, and all the citizens were inspired to plan boldly and execute vigorously in all the walks of life and business. The mental force which it brought into action told with great effect.

This general enthusiasm of eagerness to provide all the conditions for the great developments they foresaw was shared by the General Government as well as by the mass of the people, which it, in this at least, very completely represented. For many years every possible encouragement was given to the extension of the railway system. To assist their construction in the thinly settled, or entirely vacant, sections, and over the vast distances of the West, Congress granted, between the years 1850 and 1870, about 80,000 square miles of unsettled land to the corporations undertaking the work. Some of this land was worthless and some companies failed to meet the conditions; but it has been estimated that nearly 60,000 square miles would be available and valuable to the companies. Besides this, the Government lent its credit in bonds to the Pacific road for over sixty-four million dollars. States, counties and towns followed this example with contagious enthusiasm, and there was accomplished, in a few years, a work that might reasonably have occupied generations. They did not see the point at which it was advisable to moderate their action, and where encouragement became a waste and a loss, involving great financial difficulty for the production and business of the country. The world could not immediately find sufficient market for the supplies necessary to occupy all the railways, so over-extended, nor a sufficient surplus population to occupy and cultivate all the wild lands so opened to settlement.

In their eagerness to accumulate and to obtain large revenues, railway organizations consolidated to secure a monopoly of business and control the price of carriage, and provoked opposition and counter combinations; excessive investment in railway extension, excessive production, excessive speculation and the determination to recover the currency from the depreciation it had sustained by excessive issue during the war, combined to bring on a serious financial disturbance in the autumn of 1873. Loose morality inevitably gains ground when the confusion of war gives a shock to the stricter habits of peace, unaccustomed profusion of expenditure tempts the ambitious to speculation and illicit gain; and these disorders no doubt had much to do with the sudden check to the rapid movement of business. Activity had become too great in certain lines, enthusiasm had turned to fever, and ends had been lost sight of in the preparation of means.

Yet, happily, in a country where action and reaction have a play so free and undisturbed, the cure of evils is soon and naturally accomplished. While the active period of railway expansion continued individuals and communities were eager to have one, or several, passing near them because they advanced the value of property; the yearly earnings of the roads averaged $10,000 per mile, and the investment of money in railway stocks, the opportunities for speculation on a large scale and in various ways stimulated capitalists, and financiers, individuals and companies found many opportunities for gain. The free organization of American institutions provided no general control over the activities of its citizens, and left the extension of the railway system, as other branches of business, to the operation of the laws of trade. When railroad investments no longer proved profitable they must cease of themselves.

It became apparent in the end, that railway building did not really require government aid any more than other branches of industry, and that such aid, in the majority of cases, sooner or later served to over-stimulate that branch and found its way quite as often into the hands of individuals as into the public purse. As a general result it disturbed, instead of aiding, the natural course of development, and produced evils greater than it removed. It increased the tendency begun during the periods of profuse war expenditure, to accumulate wealth in the hands of individuals. It rendered corporations powerful enough to exert an excessive control over general business, more to their own advantage than to that of the public; and it helped to destroy the equilibrium of development which alone can prevent difficult situations and financial crises that sweep, like a tropical storm, over the business of the country, leaving ruin and paralysis in their track.

Yet this stimulus to private and corporate enterprise was far from being all evil. The initiation it gave to great undertakings which promoted rapidity of development and tended to equalize the advantages of all the sections of the whole country, the immediate access afforded to new sources of great wealth, and the increase in the variety and magnitude of industrial development, could not be other than an advantage in many ways, and highly profitable in the long run. The harm was limited and temporary; disturbing relations rather than resources. It was so far a positive benefit that the disturbance of business made political economy and the laws of trade and finance the subject of a prolonged and profound study while industry was changing its front and its organization, and capital was preparing for new undertakings. The sudden introduction of new and powerful forces into the fields of business, and the immense wealth developed thereby, had disconcerted the best trained intelligence of the age; the laws of business and industry applicable to former times and different situations were no longer in point; fresh studies were required to master a science whose field had lost its ancient boundaries by a vast enlargement and included new elements.

The financial reverses and business stagnation that followed the autumn of 1873 gave the needed opportunity of re-examination, and an immediate effort was made to comprehend and control the difficulty, to eliminate the immoral elements introduced or inspired by the confusion and disorder of war, and to apply such modifications to public policy as experience and reflection should suggest. The result could not but be beneficial. Meantime the true wealth and prosperity of the country remained the same. The Valley, the seat and source of the bulk of real wealth in the nation, was least affected by the temporary check—the ebb-tide of business—her farmers still supplied the markets of the world with their surplus products, and, by organization, were able to apply some restraint to powerful corporations by whom they had felt oppressed, and secured a larger per cent of profit on their products than formerly; and, though the rush of improvement ceased, extensions of the railway system actually required continued to be made.

That system had grown by nearly 5,000 miles yearly for the three years following 1870. It still continued to extend at the rate of more than 1,000 miles yearly. Many roads became unprofitable to the holders of their stock while yet doing good and useful service to the communities through which they passed; and in general, after a little time, the financial reverse was more injurious to individuals and corporations than to the public at large. In this, as in so many other cases in American experience, the free operation of social and industrial law soon corrected the errors of governments and the disorganizing effects of unnatural events—such as excess and hurry of immigration, the existence of slavery, civil war, and general overhaste in improvement. All the departments of life are found to have been submitted to the operation of definite laws, and to possess, in themselves, a recuperative power which, if its operation be not interfered with, quickly reveals a remedy for the wounds that may have been received by ignorant or excessive action; and this remedy commonly presents itself during the reaction following naturally after the harm.

During this period of activity following the war, every part of the Valley was made accessible and obtained profitable connections with the markets it required; or, in cases where important links had not been completed, in 1873, they were finished subsequently. Texas, New Mexico, Colorado, and even the Indian Territory, were brought into relations with all the rest of the country.

In 1874, the lines of railway west of the Mississippi, in all the States and Territories to the Pacific, fell but little below 20,000 miles; the five States formed out of the original Northwest Territory had constructed nearly 21,000; and the remaining part of the Valley had more than 8,000. Of the railways beyond the Mississippi scarcely 3,000 miles lay beyond the western border of the Valley, and about 45,000 out of the 72,600 in the United States, were in the Valley itself.

The total cost of all these railways has been considerably more than twice the amount of the public debt.

This was the material preparation for the new union and the new greatness which was rendered possible by the result of the war. In the accomplishment of this task the railway was powerfully aided by the electric telegraph, which, extending its intricate network still more widely than the railway system over all parts of the country, put every section in daily and at need, almost instantaneous, communication with the rest; it facilitated the dispatch of business as much as it promoted intimate intercourse, mutual acquaintance and unity of sentiment.

These two instruments, the one bearing exchanges of value, the other exchanges of thought, consolidated the Union much more perfectly than the war could do it. They aided in equalizing the wealth of the sections, in building up mutual interests and sympathies, and in removing all the remaining barriers that kept them apart.

CHAPTER VI.

PRODUCTION OF MINERAL WEALTH IN THE NEW ERA.

The universal spread of railways in the Valley furnished a test of its capacities in many directions. The Atlantic Slope had proved to be extremely rich in coal, in iron, and in building material, and the Pacific coast had, soon after 1870, already supplied a thousand and two hundred million dollars in precious metals. The Valley had been chiefly esteemed outside of it for its capacity to supply unlimited quantities of food and for giving, by these supplies and its purchases, the most complete support to the varied manufacturing industries of the East and the mining of the West. It seemed almost unfair to other sections that it should display anything more than a local abundance of resources in their own special lines.

Yet, the magnitude of modern development rendered a monopoly of any one line for a limited region impossible for any long period of time. Competition reduced profits to a narrow margin and made it necessary for many branches of business to transfer themselves to the regions where they could be pursued most economically. Under this imperative law of economy, the mineral wealth of the Valley began to rise to prominence with the spread of railroads, and, from seven to ten years after the war, some of the industries found it impossible to maintain an extensive and profitable activity without its aid.

The Valley had been projected on a grand scale in all its features; whatever it did contain was found, in most cases, to be incomparably abundant, superior in quality, and to be obtained with unaccustomed ease and cheapness. Geological explorations had already, before the war, made known many of its advantages; and the great State of Pennsylvania—lying on either side of the mountains—soon found the western part more varied and abundant in sources of wealth than the eastern, notwithstanding the enormous deposits of anthracite coal which lay so near the largest cities and greatest manufacturing centers of the country. The production of petroleum and coal across the mountains became, soon after 1870, nearly equal to the vast coal trade of the anthracite fields of the east; and the iron trade soon developed in the Valley to great proportions.

Although most of the States of the Atlantic border abound in iron, which was first worked there, the larger quantity, purer quality and greater ease and cheapness of production speedily led to extensive mining on Lake Superior, in Missouri, in Tennessee and Alabama; and more especially that an abundance of suitable coal was to be found within easy reach of the ore beds. The water highways of the West permitted the superior ores of the Michigan and Missouri mines to be cheaply transported to the vicinity of the coal mines of Pittsburgh and Ohio, to Chicago and to Indiana; while the proximity of excellent ores and extensive coal beds in West Virginia, Kentucky, Tennessee and Alabama encouraged the progress of iron production in those States. In 1872, when the point of highest production was reached, the amount of pig-iron from western ores began to approach one half that of the whole country. The rapid increase of this production was checked, in 1873, by the financial crisis; but it became quite evident that the facilities of the Valley would, in a few years, concentrate within its borders much the larger part of the iron production of the country. England has long produced one half the iron and steel used by the world, obtaining much of her ore from other countries; but the Valley, which has both the best ores and suitable coal in unlimited quantities, will inevitably, from these facts, take the lead of the world as well as of the country at no distant time.

In 1856, the world consumed 7,000,000 tons of iron annually; in 1874, 15,000,000 tons; by the end of this century it is estimated that it will require 25,000,000 tons. In 1860 this country produced somewhat over 900,000 tons; in 1870, 1,800,000; which rose, in 1872, to 2,800,000. In 1874 all the furnaces of the country had a capacity for producing 4,500,000 tons—but little more than half that capacity being then actually used. The growth of this industry is scarcely begun; but it is destined to an enormous development. The most promising points seem to be in the vicinity of Lake Superior and Missouri, though they may be possibly equaled in Tennessee, Alabama and some other regions; Ohio and Arkansas give great promise of future abundance. Of all the blast furnaces in the United States in 1871, more than one half were within the Valley.

Of the 50,000,000 tons of coal estimated to have been produced in the United States in 1873, about one half was from various parts of the Valley; Western Pennsylvania furnishing about 15,000,000 tons, Michigan 30,000, Indiana 800,000, Kentucky 300,000, Illinois 3,000,000, Colorado 200,000; Iowa, Missouri, Arkansas, Alabama, Tennessee and West Virginia produced the remainder. Texas is said to have fine qualities, and probably considerable quantities of coal, which have not, as yet, been very extensively worked.

Most of the States have more or less copper, but the Lake Superior mines at present throw all others into the shade. From 1858 they have been progressively productive, until, in 1874, out of 19,700 tons of pure copper produced in the country, 17,300 were obtained from them, with all indications of an inexhaustible supply for the future.

In 1870 the census statistics of mining, including quarrying, oil-boring and peat-cutting, amounted to $152,590,000 in value; and of this product $80,400,000 was obtained in the Valley—4,300 out of the 7,900 establishments being located there. In 1874, 10,600,000 barrels of petroleum—nearly all from the Valley—were produced. In 1870, all the salt produced in the country was valued at $4,800,000, of which $3,800,000 was the product of the Valley States.

The product of the borders of the Valley in the precious metals has been comparatively insignificant; yet, up to 1872, all the regions drained by the Valley systems of rivers had produced about $55,000,000, with an annual product at that time of at least $10,000,000, and the explorations appeared to be yet in their infancy. It is not improbable that the eastern slope of the Rocky Mountains will produce, when it comes to be carefully worked, at least one third of the annual product of precious metals in the whole country. Yet, except to the development of the regions immediately concerned, this industry is of comparatively small moment. It has been affirmed that these metals cost twice their intrinsic value to obtain, and they are mainly useful as measures, or representatives, of value, while iron is stated to add by a thousand fold of its original value when wrought up for the various uses of civilized man, to his actual wealth, or to his capacity for producing wealth; and four tons of coal, employed in generating steam, is said to produce an effective force equal to the muscular power for labor of 35,000 men.

It is truly significant, that this remarkable region is most eminently rich in those metals most important to man as aids in attaining the highest ends of the most perfect civilization and of the truest prosperity. The Valley has unlimited stores of material for the necessities, the conveniences, and the comforts of man in his most cultivated state, and was evidently constructed for the purpose of bringing together, in a compact body, the largest number and the greatest development of useful industries that will ever be found in any one region of the earth.

CHAPTER VII.

RAPID GROWTH OF MANUFACTURES.

But one generation has passed since the railroad began to lend its aid to the development of the Republic, to any considerable extent. In 1848, but little over 8,000 miles of road had been built. At that time the West had been rejoicing over the powerful aid of the steamboat for more than twenty years, had invested largely in canals, and had found the capacity of water carriage unequal to the vast amount and kind of work required. The proper points were not reached; the cheapness, speed and safety required were unattainable, so great was the rate of growth in production and of capacity in the markets to be supplied. The difficulties of cost, of time, of space, must be overcome.

These were set aside by the railroad. It could be extended everywhere, it was so elastic; it was capable of enlargement to meet all possible necessities in the amount of labor to be done. Nothing so unified the country, so equalized the advantages of different sections, so set aside natural difficulties. While there still remained large margins of profit in all branches of trade it promoted, it was almost as if all the mountains had been leveled and the far interior brought to the seaboard. Yet, this was a brief period, for production was so stimulated that competition reduced the margins, the cost of transport became again an important item, and the first consideration was to reduce it. Mountain districts containing the minerals necessary to the manufacturer were no longer shut out from the field of competition because no navigable stream opened their way to the outside world. A railroad set aside their difficulties and made their wealth of material available. Ease of access to and from every part of the country diffused its industries by the freedom of movement permitted. As heat and water dissolve different mineral substances from accidental or mechanical combinations and restore to them their freedom to act after their highest law, or strongest affinity, so the railroad gave to industry and trade full liberty to rearrange themselves according to their respective interests. They were no longer subject to arbitrary influences, nor required to remain where they had been placed accidentally, or under the demands of a different or more restricted population and smaller markets.

The Valley was so rounded and full in its capacities of serving the wants of the age; so well formed and so related to the most active and progressive parts of the modern civilized world, as to favor freedom in every line. No development anywhere in the world has ever been so completely free to obey natural law; and this complete freedom came to manufactures with the full development of the railroad system, which relieved transfer from the restraints of distance, time and cost. It unchained activity—rendered it fluid, so to speak—channels were opened in every direction, it could go when it was wanted, and form a reservoir for re-distribution wherever the circumstances favored. Therefore, all the capacities of the Valley were now at command and manufactures sprang up in all favorable localities.

As will be seen by the figures of the following chapter, the amount of manufactures in 1850, '60 and '70 compare as 24, 42 and 145 for the respective periods. Continued backward 1840 may be represented as 10 and 1830 as 4. The manufactures of 1820 were inconsiderable, amounting to a few millions altogether. The increase was still greater up to 1874, when financial difficulty arrested the development of that class of activities, in most branches, throughout the country. Yet, the production was largely for local uses, in the Valley, whose farmers continued to prosper far beyond other classes of the people, and the comparative diminution in volume was less there than elsewhere. The manufactures of the whole country, in 1850, were very near *one third* smaller than those of the *Valley alone* in 1870. All the manufactures of the United States were given as $1,019,000,000, in 1850, and in the Valley, in 1870, at $1,455,000,000.

Such a growth has as nearly the appearance of the miraculous as any operation of natural law can have. This industry has a natural fixity—an obstinacy of attachment to the locality where it has taken root—greater than almost any other. Having invested capital and conformed surrounding circumstances to its requirements, by degrees and much trouble, it does not easily determine to change, and growth is apt to cluster around original beginnings, where the first difficulties have been overcome, and where, in general, various special circumstances favor it. The East had made it a specialty and was ready to increase its production to supply all demands; but, notwithstanding, it must see a very prosperous rival suddenly step into the market. In the twenty years, between 1850 and 1870, the entire increase in the value of manufactures in the United States was $3,213,000,000, of which the increase in the Valley was $1,213,000,000. With all the advantages of the East, its volume of gain above that of the Valley was but $787,000,000, or less than a fourth part of the entire gain. That relative gain was probably largely reduced in the five years following the taking of the census.

This vast growth of manufacturing industries in the Valley was of signal advantage to it. The articles made in its midst were much cheaper—a saving of many tens of millions to the Valley people—while a better home market for produce was made, giving a direct gain of fully as much more to the farmers of that section.

This growth in the center of the Valley was relatively much greater than on the borders. The advantage of entire freedom in the labor system was seen in the transfer of *one third* of the entire manufacturing interest of the Valley, in 1870, to the former slaveholding States. Before the war the results of this kind of industry were trifling in the slave States. Of the twenty States in the Valley, Missouri produced nearly one seventh of the entire manufactures of the section, and only $63,000,000 less than Ohio, the "New England of the West," which had early established those industries and for some decades, with Western Pennsylvania, almost entirely monopolized them.

One third of the manufacturing industries in the Valley had, in 1870, sought the central region, indicating a very strong tendency to much greater relative growth there. This tendency is likely to be permanent for a long time to come. Facility of access, ease and cheapness of distribution, are likely to seek central points for large classes of articles. With the new, deeper and broader prosperity that will follow the readjustment of business, made during the financial depression, the old tendencies are fairly sure to be resumed. It has been so in every case hitherto in the Valley. Its greatest agricultural wealth has gravitated in the same direction as the rivers, and its manufacturing development will radiate from the central points.

CHAPTER VIII.

THE TRANSFER OF INDUSTRIES TO THE VALLEY.

Many circumstances had tended to localize the manufacturing industries in the East. They had been established there while yet the West was a new, thinly-settled frontier and very difficult of access, and had reached a vast development while the mass of the population and the general capital of the country remained on that side of the mountains; great investments had been made in machinery and buildings, and the people had been taught the necessary skill. Only powerful inducements could transfer them, or the recent growth of them, to another locality whose leading feature was agriculture, the almost miraculous growth of which was creating so much wealth among the masses of the people, and making so many fortunes. It was natural to suppose that the growth of manufactures would —until the Valley became comparatively old in its specialty —be slow, and that no great degree of actual transfer would take place for many decades.

Up to 1860 this had been the case. Between 1850 and 1860 the product of manufacturing industries outside of the Valley had doubled; within the Valley the increase was less— about as 11 to 6. Between 1860 and 1870, on the contrary, the gain in the value of the products of manufacturing industries in the Valley was about as 14 to 4—or increased by three and a half times itself—while the gain in the East was nearly as 42 to 19—only a little more than doubled. This great change in the direction of the gain intimated a sudden and extensive process of transfer of the seat of some manufactures from East to West. At the same time the growth of population in the Valley had been only as 20 to 15; while outside the Valley it had been as 18 to 15.

That is to say, products of manufacturing industry in the Valley had been given as about $242,000,000 in 1850; $440,000,000 in 1860, and $1,455,000,000 in 1870; while the entire manufactures of the whole country were worth $1,019,000,000 in 1850; $1,885,000,000 in 1860, and $4,232,000,000 in 1870. In the latter year one third the value of all the manufactures was produced between the summits of the Alleghany and the Rocky Mountains. The gain in manufacturing establishments was not so great. The Valley had 41,900 in 1850; 52,100 in 1860, and 118,100 in 1870. The increase in the proportion of products to the proportion of manufacturing establishments in the Valley was as 3½ to 2⅓.

Of the manufactures in the Valley about 60,000,000 more than one half were produced in the five States formed out of the original Northwest Territory; one third was obtained in the States originally slaveholding, and more than one fifth west of the Mississippi. More than one third was produced in twelve principal cities; Pittsburgh, Chicago and St. Louis furnishing four fifths of this, and St. Louis—the third manufacturing city in the Union—nearly one half of that, and about one ninth of all the manufactures of the entire Valley.

Not far from one eighth of these manufacturing products of the Valley came from the flouring mills—although but a portion of her grain was made into flour within her borders. Of the $51,000,000 worth of agricultural implements made in the United States $32,000,000 were made in the Valley, and nearly two thirds of these were produced in Ohio and Illinois. Ohio made these implements to the value of $11,900,000; New York $11,800,000, and Illinois $8,800,000. No other State made to the value of $2,000,000 except Pennsylvania $3,600,000; Indiana $2,300,000, and Wisconsin $2,100,000. Of the $125,000,000 in value of machinery (other than agricultural), made in the United States, $43,000,000 worth came from the workshops of the Valley—more than one third. Much of her pure metal and some of her ores went to the great manufactories of the East to be worked up, and some metal was exported. Of the amount made in the Valley, Ohio, Western Pennsylvania, Illinois, Missouri and Indiana produced more than three fourths, of which Ohio produced one fourth, Illinois one seventh, and Missouri one tenth. Of the carriages and wagons—amounting to sixty-five million dollars in value in all the country—the Valley States made thirty-one million dollars' worth, or very near half. In this industry Illinois, Ohio, Michigan, Indiana and Missouri took the lead; Wisconsin, Iowa and Kentucky following in order. About six million dollars' worth of cotton goods were manufactured in the Valley, not far from two thirds of which were made in the southern part of the basin.

Without going into further details it is plain that the East has no monopoly of manufacturing; that many of those industries have displayed an evident intention of emigrating across the mountains in the wake of much more than half the inhabitants of the country. This movement did not become decided, as a large one, until after the war, and, in 1870, it had but fairly set in. It was actively kept up until 1873, when the financial reverses of the country struck manufactures, generally, with paralysis, where not required for immediate consumption. Yet, the West was more fortunate than other sections, because its great industry—farming—gave more clear revenue to the producers than ever before, from the greater cheapness of transportation, and could spare more, in proportion, for improvements and luxuries than the other parts of the country.

That it steadily advanced in the direction assumed previously to 1870 is proven by the great growth of its large cities and multitudes of its towns. Chicago and St. Louis, with a population of 298,000 and 310,000, respectively, in 1870, came to contain, by estimate of their people, each nearly half a million inhabitants, in 1876, and many smaller towns grew in proportion, which implied great progress in the variety and extent of the manufacturing industries which, in considerable part, supported them. While there is not likely to be any failure, in the East, to hold a steady progress in its industries, great growth will more and more characterize the manufactures of the interior in directions which seek to supply those regions, while greater convenience of access to the materials used will lead to a constant process of transfer of certain industries from the East to the West.

The great city in the heart of the Valley and of the country, on the banks of the Mississippi and near the mouths of the Missouri and Ohio, which has passed so many others so rapidly in attaining the rank of the third manufacturing city in the Union, has every reason to believe it possible that, at no distant day, she may occupy the first place. As the upper and lower Valley and the region between the Mississippi and the Pacific coast fill up with prosperous inhabitants her industries must increase in proportion. It is difficult to see why the causes that have led to so startling a development there, in a few years, should not continue in operation with an increased momentum.

The manufactures of Missouri, which, in 1850, were $24,000,000, and in 1860 $41,000,000, were, in 1870, in spite of the disorder, waste and depression of four years of civil war in the State, $206,000,000. Illinois and Ohio had less to interrupt and much more to stimulate them during the years of the war. They lost no time, labor or means in the re-organization required in Missouri, and a fuller tide of prosperity had set in for them both by 1860. In 1850 the manufacturing industries of Ohio produced values given, by the census, at $62,000,000, which, in 1860, amounted to $121,000,000, and in 1870 to $269,000,000. Illinois manufactured, in 1850, to the amount of $16,000,000, in 1860 of $57,000,000, and in 1870 of $205,000,000. The rate of increase in Ohio during the second decade was 2.22; in Illinois 3.59, and in Missouri 5, notwithstanding the stagnation and waste of war. The development of the southern Valley, near the Mississippi, the Missouri, and the regions west and southwest of them, in the years to come, and the singular extent and variety of their resources, with the favorable situation and mineral riches of Missouri, would seem to assure it a far greater ratio of progress in the future. St. Louis, as a manufacturing center, will grow in proportion.

Arkansas is rich in some of the best qualities of coal and has already begun preparations to supply to the lower Valley what it has been accustomed to receive from Ohio and Western Pennsylvania ; Texas is said to possess anthracite coal ; Colorado is already producing coal at the rate of 200,000 tons yearly ; and other regions west of the Mississippi are known to be rich in that essential of manufacturing and mechanical progress. The southwestern and the western sections of the Valley are therefore certain soon to display the high speed of progress in all the elements of wealth and industry that has been so marked in the States north of the Ohio and east of the Mississippi since 1850. Progress in every section of the United States can scarcely fail to be immense; but the period for the transfer of capital, of skill, and of the most profitable activity to the Southwest has but just arrived, and the dial which shall mark the advance of that growth is located in St. Louis.

The need of cotton manufactures in the South is being met and a certain amount of transfer from New England of that industry has set in and proved so highly successful as to justify the foresight of its great increase in the near future; the production and manufacture of iron is gaining a solid footing in East Tennessee and Alabama, with the promise of a magnificent development in due time; and Michigan, so favorably situated and so remarkably rich in its upper Peninsula, in mineral resources, has given indications of a growing tendency to compete with other manufacturing States of the Valley for a high place in the front rank. Her products in this line of industry advanced from $11,000,000 in 1850, to $32,000,000 in 1860, and $118,000,000 in 1870. Development, begun along the Ohio, has already reached the northern latitudes, the facilities and material there are unrivaled, and, having fully started, the Northwest will make great progress.

There was, therefore, a new start made in the Valley in manufacturing industry at the close of the war. When the census of 1870 was taken that fresh impulse had but fairly commenced. It may be justly concluded that the regular per cent of increase had not been reached in so short a time; for the few previous years had been only a portion of the period of beginnings in many industries destined to colossal development. No data sufficiently reliable and extended have been attainable since to furnish an accurate measure of the later speed of progress, but they will be supplied by the census of 1880; yet, the indications of the summaries furnished by commerce, by the export of the products of different branches of industry, and various manuals of trade, indicate the full realization of a very reasonable expectation of immense development up to, and in some cases after, the financial disasters of 1873. There is also much reason to suppose that the arrest of activity in various lines of manufacture in the East favored a change of location to more desirable points in the West and South; or a considerable amount of transfer to the advantage of the Valley; particularly in those branches which had nothing to hope from foreign commerce in the near future, but bore important relations to the whole country. To these a central location was desirable and the middle Mississippi region alone could furnish it.

It was this relation of the Valley that rendered the result of the war in preserving and strengthening the Union even more important to it than to other sections. The wide relations, constantly growing in magnitude, and the severe competition of business reduced profit to an extremely small margin. A central position most convenient to material and to the largest number of customers often made the difference between success and failure, or, at least, threatened to have that effect.

An entirely free system of trade relations between all sections of the country favored the interests of all in a high degree; but most of all, that which had the most numerous relations—the central Valley. It must become, to a large extent, the common ground for economical exchanges, and the theatre of the most varied activities aside from its natural capacities for valuable production. It had, therefore, an eminent interest in unity and harmony.

The specialties of the East and the West, of the manufacturing and mining sections, made them its best customers, the largest buyers of its surplus food products, and profit might often depend on the cheapest and freest transfer. As it was the real center, capital from other regions flowed to it, a certain share of the industries most peculiar to other regions would be transferred to it from motives of convenience, and it would assume pre-eminence from its position as well as from its resources. This tendency is likely to continue and gather strength as time passes.

CHAPTER IX.

CULTIVATED AREAS AND FARM VALUES IN THE NEW ERA.

The brilliant progress secured to the Valley from the close of the war had commenced with the second year of that struggle, when the first line of Confederate defence had been broken. The loyal part of the Union no longer doubted the ultimate result; the issues of bonds and legal tenders of the Government served the purpose of a vast capital supplied to the business of the North; and the States above the Ohio River commenced a new career of remarkable prosperity. In all the free States a new impulse had been given to manufactures and trade, railways were organized or extended, cities grew apace, workshops sprung up and business of most kinds became unusually active.

The eastern States extended their agriculture under the stimulus of high prices, and by favor of improved methods, excellent fertilizers and machinery increased results with a smaller corps of laborers; but their best lands had long been occupied and the growth of agricultural products became, from year to year, less adequate to the supply of a non-agricultural population that was growing so much more rapidly. The greater supply required was obtained chiefly in the Valley and on the Pacific coast. In the East the vigorous and ambitious sons of the farmer were drawn to the cities by the favorable openings offered to industry and enterprise through the factory, the workshop, and trade. A fortunate venture, a few years of diligence, or a government contract, often produced a fortune; while the farm promised, at best, moderate gains to persevering toil.

The fertile Valley, however, gave more generous promise, lent itself more readily to the use of machinery, and furnished large returns to small investments. Railroads penetrated already through and through its most fertile sections, and bore its exhaustless abundance, at comparatively cheap rates, to all the villages and towns of the manufacturing East as well as to the great commercial centers. The war, the growth of cities, the new activity everywhere, helped to build up the agriculture of the West.

The increase of the Valley, as a whole, in its acreage of improved lands in farms, between 1860 and 1870, was but 28,000,000; but the 90,000,000 acres of 1860 included the lands of the southern Valley, which failed to show as largely in the census of 1870 as in that of 1860, in cultivated land, by 39,000,000 acres. This loss, and its natural gain had there been no war, would probably have amounted, at least, to eighty million acres, which must be added to the gain as it appears in the census to show the real progress of the Northwest. The value of farm lands in the Valley amounted, in 1860, to three thousand, seven hundred million dollars, in 1870 this value had advanced to five thousand, four hundred millions; while those values in Alabama, Arkansas, Mississippi, Louisiana, Texas and Tennessee had fallen off, in 1870, from the amount given in 1860 four hundred and eighty-five millions. Their united increase, added to the greater increase of Missouri and Kentucky had there been no war, should have been at least a thousand million dollars. The southern Valley may be fairly estimated to have lost in agricultural values, as a result of the war—in direct waste and failure of natural increase—to the amount of two thousand million dollars.

The actual gain of the whole country in the value of farms was two thousand, six hundred million dollars; of which one thousand, seven hundred millions was in the northern Valley. The absolute gain, however, ascertained from the statistics of the several States and Territories of the Northwest with Missouri, Kentucky West Virginia and Western Pennsylvania was about two thousand, five hundred million dollars. As the entire value of farms in the United States, by the census of 1870, was $9,200,000,000, the gain of the upper Valley, during this decade covering the years of an immense and wasteful war, was more than one fourth of that vast amount. This advance was made in a disturbed period and at long distances from the great markets, while about half a million of the more effective farmers were withdrawn from their labors for nearly half the time, and one half of these were killed, disabled by wounds, or broken in health. This sufficiently indicates the astonishing capacity of the Valley for agricultural progress. Railways and farm machinery supplied its losses and carried it triumphantly over every obstacle. The values lost in the South were more than replaced in the North.

The gain of the whole country in the value of farming implements and machinery during this decade was one hundred ten million dollars, seventy millions of which was in the Valley, although the losses in this respect, in the southern Valley, were so great during the war that in 1870, the values of 1860 had not been replaced by twenty-five million dollars. There was, therefore, an absolute gain in the value of farm appliances in the upper Valley of nearly one hundred million dollars—much more than one fourth of the entire value of those articles in the United States in 1860, which then amounted to the value of three hundred and thirty-six million dollars. This investment, much of which was in labor-saving machinery, explains the great material progress in agricultural values during a period of changes so great and trying to the country. In many cases it enabled one man to accomplish the work of ten and produce a corresponding increase of income, although, necessarily, a part of the additional income must be spent in the purchase of these instruments of labor. But by their means the supplies and waste of war, the increasing amount required by the growth of manufactures and large proportionate decrease in the numbers of the agricultural population, were obtained with ease, and the war was closed in the midst of an almost unprecedented general prosperity. For this it had to thank, first, the generous promptness of its glorious Valley, and, second, the inventive genius and skill of its artisans and mechanics, and, not least, the capitalists who invested so freely in the vast lines of railway that made the results of the other two so completely available.

This combination of favorable circumstances, at a most critical period in the history of the Valley and the political situation, was but one of a series of seeming accidents which we must regard as the expression of a law controlling and guiding human events and social development. All history illustrates this law which binds the whole race together in a regular sequence, or progressive growth. The treasures stored in England and the character of its inhabitants were made to tell, at the proper moment, with the greatest effect, on the development of the civilization of the whole world. The course of history is like that of a river which grows constantly broader and deeper and more powerful with its advance. Every considerable change in locality finds it increased in volume and force ; the past is repeated, but with a change and in larger proportions. The immense power added by the Valley to the course of events must have far more effect on the history and development of mankind than any previous cause whatever. Its entrance into history with its population, unequaled in intelligence and energy, marked the commencement of a period of changes of great and beneficent magnitude. It has only begun to tell on the general course of events; but the tendency of its influence is clearly marked and most satisfactory. The character of its people, under favor of events which can not be regarded as fortuitous, but rather the operation of a law, or system of laws, which secures the progress of mankind, as a whole, in a high and noble direction, assures the employment of its immeasurable material resources in the interest of human welfare.

This was the true commencement of the period of profits as distinguished from the period of investments. Pioneer labor—breaking ground, building, covering the face of the country with all the important features of a truly and highly civilized land—had been heretofore the main features of Valley life. More than could be earned by the people with all this abundance of production had to be spent in improvements. These improvements paid partly in immediate and partly in prospective values. They promoted the morality, good order, intelligence and general welfare of the communities as well as increased the present value of property. But a part of their value could not be turned into dollars and cents at once; the remainder was necessary work saved to future generations, which would devote themselves, more fully than these pioneers, to the work of reaping what had been sowed. The pioneers had labored and others entered into their labors to continue them and to reap both a higher kind and a larger per cent of profit.

Every generation accumulates something which the following inherits to add to it and transmit increased to its heirs. It is thus that a grand progress—an accumulating value in possessions, arts, ideas, institutions and character—has been secured to mankind. There has been a steady onward march of the eras, centuries and generations. Each has added to what it received, and the general capital of the race has incessantly accumulated. Every race, every land, every active life, failure as well as success, has added something to the general fund; some more, some less, according to their quality and gifts, but all something. It is hard to say who have done the most among nations; but the Anglo-American is not behind the foremost, and it is not easy to see why the Valley has not been permitted to give the most among all lands. England makes all lands her tributaries; but the Valley contains almost all classes of resources in itself.

CHAPTER X.

THE GIFTS OF THE SOIL—AGRICULTURAL PRODUCTIONS.

The value of the farm products of the Valley in 1870 was over one thousand, five hundred million dollars; those of the rest of the country were stated at nine hundred million. But the prices obtained in the regions outside of the Valley were, in general, one third larger than the average prices of the same kinds in it because they were surrounded by markets, while the products of the Valley had to go far to seek them. It is also to be considered that the States of the southern Valley did not, in 1870, produce one half as much as in 1860, and also that the estimates of the census of 1870 were made on a year that was below the average of production. If the average value of production in all parts of the country and the average production of each year from 1866 to 1876 be applied, the annual value of farm productions in the Valley would not vary much from two thousand million dollars.

In 1860, the number of bushels of the principal grains raised in the United States was twelve hundred thirty millions, eight hundred fifty millions of which were grown in the Valley. In 1869, the whole amount was thirteen hundred eighty millions—the Valley then supplying ten hundred and thirty millions, notwithstanding an immense falling off in the southern part of it. The progress made in the first half of the decade, commencing with 1870, has been much more striking. The crop of 1875 was about three fourths larger in the Valley than that of 1870 ; and more than twice that of 1869, amounting to seventeen hundred and twenty million bushels—the product of the whole country being stated at twenty-one hundred and ninety million bushels. In this year the production of corn was ten per cent larger than in the previous year, the whole country supplying thirteen hundred and twenty million bushels of that grain, of which eleven hundred and forty were from the Valley.

Yet, not one tenth of the productive lands of the Valley were cultivated in the last year named, and the period of beginnings is so recent in most of the area that a simple and exhaustive process of cultivation is generally pursued. A restorative process, that constantly returned to the soil the most important elements taken from it and keeping it at the highest point of productive capacity would, perhaps, afford on an average, results four times larger over the same surface. Therefore, the utmost that has yet been obtained in the most favorable years is but a faint suggestion of its wonderful possibilities.

In fact, production is so easy and abundant that individual eagerness is constantly pushing results beyond the profitable point. The enormous yield of corn, in 1875, of five hundred million bushels beyond the average, so reduced prices that, if the same sum be considered to have been paid for the amount of the previous crop, this excess was worth but *one cent* a bushel. An excess is, in this way, shown to be a heavy loss to the producers, for the cost bestowed on it before it is ready for market is large. Yet, if the producers lost, the consumers gained and either hoarded the surplus, which distributes the wealth of the Valley over the whole country, or furnished the results of their own labors to the farmers at a cheaper rate, which returns to them something of their loss. Probably the first is done, for the time being, but the last is sure to occur ultimately in some degree. The general result is, that the world's toilers live with more ease, and the Valley spreads its blessings far and wide.

Western agriculture has always been on the verge of overproduction and is likely to be so for a long time in some directions. Its surplus must go from one to four thousand miles to its final market, and the cost of transport so diminishes the profit of the producer as to create great embarrassments for the Western farmers. The gain of the laboring and trading millions is his loss to a large extent, and sets him to an anxious search for the means of repairing it. This is hard to find; for if he obliges the railway to share its profit with him the railway system—which is his best ally—falls into endless difficulties which he can not avoid sharing more or less ; co-operation to reduce the cost of his purchases disturbs the world of trade, and creates other difficulties which trouble the prosperity surrounding him, and which must affect him at some or various points. A direct and immediate remedy produces confusion and more or less loss. In a general way, it may be stated that the less interference attempted the better.

As the great laws that control the intercourse, the conduct and all the business interests of men come to be better understood they are found to echo the demand that laid the foundation of the American Republic, and has caused it to be so successful through its first century of existence—that for self-government. The instinctive sense of the Anglo-Saxon in America discovered that the fault of the European was too much government—an unwise interference with interests of whose laws he was more or less ignorant. Self-government would permit him to reduce and control the evil. Experience has, thus far, justified his position. It is not easy, however, for people or legislators to arrest governmental interference at the right point, and American history gives indications that there is still too much government.

The history of the business interests of the world fully sustains the American idea. These interests are thoroughly republican and demand a clear field. Business may be readily disturbed by legislation or combined action, but it is not so easily aided. Its laws are self-executing and operate with full effect only when left to their freest action. Assistance, offered with the best motives, often introduces confusion; restraint produces more or less paralysis in some part of the machinery and increases the evil. All departments of business have, when not unnaturally restrained, a healthy power of restoring lost equilibrium and of reducing to due and moderate limits any excessive action.

So the misfortunes arising from the excessive productiveness of the Valley are to be most readily overcome by leaving its agricultural interests to self-government. Left free to work the remedy, they will, sooner or later, produce a harmony and prosperity which no effort at regulation could reach.

Over-production in certain crops tends to awaken attention to other varieties whose products are in demand. If one crop does not pay for raising, the efforts of the farmer are turned to another that will, by the certain law of personal interest. This has a somewhat narrow play, being restricted by climate and soil; yet great changes are sometimes produced in limited periods, and the inventive and enterprising genius of the American can be relied on to secure the widest possible range, for this means of enlarging variety of production of which the case admits.

The increase of the non-agricultural classes in the Valley —enlarging its market within its own boundaries—we have seen to be an actual process of enlarging profits of considerable magnitude between 1860 and 1870. It was commenced by causes that must operate more and more powerfully, within certain limits, for a long time. The rapid gathering of a manufacturing and trading population in a part of the cities and towns of the West has been one of its most marked features since the war, and never more so, perhaps, than in the three years following 1870. Somewhat modified by the financial embarrassment of 1873 and later, it can not well fail to become a permanent feature of certain regions of the Valley.

It is probable, even, that the more moderate and steady prosperity following that depression, and the great competition, which renders comparatively small differences in cost of importance to the otherwise slight margin of profit, will hasten the transfer of many branches of industry to the most suitable points of this favored region. As population gathers on the Pacific Slope and spreads through the valleys and basins of the broad range of the Rocky Mountains, as the southern basin of the great Valley grows more prosperous; and as the wide regions of the Northwest become populous, the central States of the Valley will fill up with manufacturers and traders whose customers are found in all these regions. The business of the country, within certain limits, will seek it as the most desirable location for far-reaching enterprises.

All this will help to solve the farmer's problem and enable him to sell cheap at a good profit. His customers will constantly increase at his doors. Chicago, St. Louis, Cincinnati, Detroit, Cleveland, Pittsburgh, Louisville, and a thousand other cities and towns, will rival the manufacturing centers of the East, and might far outgrow them did not the vast commerce of the Atlantic stimulate them so powerfully. The home market will grow ever larger, although better methods of farming and larger cultivated areas are sure to keep pace with it.

The spasmodic expansion of the railway system, between 1865 and 1873, will not occur again. It opened so much new and remarkably rich agricultural territory that required little labor to develop that the equilibrium was destroyed. The best lands have been reached, the sudden gush of the unsealed fountain will settle into a steady flow, whose measure can be calculated and brought within the operation of the known laws of trade. Increase in the areas cultivated and the average production will be easily calculable and the body of clear-sighted and intelligent agriculturists, applying these same laws, under pressure of their personal interests, will not experience the unmanageable difficulties of the past.

At the commencement of 1876 a general estimate of the value of animals in connection with agriculture in the United States gave the Valley, in round numbers, an investment of one thousand million dollars, and outside of it six hundred million dollars. The average value of these animals outside the Valley was much more than in it. Their whole number in the Valley was about forty-four million and out of it only a little over twenty million—not one half as many.

The statistics of crops in 1875 afford some interesting conclusions regarding the future of agriculture in different parts of the Valley. As the country advances and competition becomes closer, each different region devotes itself more and more to the cultivation of those crops to which it is best adapted and from which it can obtain the largest per cent of clear profit. Four States produced more than one third of all the wheat raised in the whole country and but little less than half of that raised in the whole Valley—Illinois, Iowa, Wisconsin and Minnesota. They are likely in the end to raise two thirds of the wheat crop of the country, since the relative quantity increases with them and diminishes in the other States.

Three States—Illinois, Iowa and Missouri produced more than one half the corn grown in the whole Valley, and with Kansas are likely to produce, in future, nearly two thirds of the corn crop of the country. The southern part of the Valley is likely to produce more than one half of the remainder.

The cotton crop must always take the lead in Alabama, Mississippi and Arkansas; sugar in Louisiana; Texas, but slightly developed as yet, is singularly fortunate in rising from the sub-tropical gulf coast through all gradations to very near the temperate climate of the upper part of the Valley, and is destined to acquire immense and various agricultural wealth; Tennessee and Arkansas are similarly favored within a smaller range; Kentucky, Ohio, Indiana and Michigan seem destined to miscellaneous productions of food for the great manufacturing population that will soon be gathered in them. The upper Missouri, as well as the upper Mississippi, will devote itself largely to the cultivation of wheat.

The whole agricultural capabilities of the Valley lying west of the western boundary of Missouri are sure to be required, at no distant day, and in all the future, to supply the large mining and manufacturing population that will gather along the eastern slope of the Rocky Mountains. Missouri, south of its river, and Arkansas will require more than their own food supplies to sustain the same classes gathered in their limits, and the cereals of the southern Valley will never fully supply their own population. Therefore, Illinois, Iowa, Wisconsin, Minnesota and Texas will supply almost entirely the wants of the East and the foreign exports of food. Indeed, before the close of the second century of American Independence, the Valley will scarcely be found, as now, too large and too bountiful in its food supplies, though they were multiplied, as is likely, two hundred fold.

CHAPTER XI.

COMPARISON OF AGRICULTURE AND OTHER INDUSTRIES.

The influence of America has considerably changed the destinies of the world by developing character, by working out high ideals, and by emancipating business from false and restrictive principles. In no particular has it been greater than in its effect on the welfare of agriculture and the agriculturist. The ease with which traders and manufacturers could combine led to the first successful efforts of the common people—the world's reliance as workers—to resist the despotism of royal and aristocratic power. The result was the commercial Republics of Southern Europe, the Communes of France and the Free Cities of Germany. The increase of wealth among the people and the power it gave soon added another to the ruling class.

But these classes, with the traders and craftsmen added, were still small compared with the masses of the people; the spirit of the aristocratic classes descended among tradesmen and manufacturers, and a small part of them soon learned to monopolize the fruits of other men's labors. As the feudel gentry made and kept the laborers on the lands serfs, so these plebeian capitalists reduced the operatives, who created their wealth for them, to semi-slavery. It was not till the *masses* of a nation could, in some way, be made capitalists and permanently independent that the combined oppression of position and wealth could be broken. The industries of Europe commenced a good work but they were unable to complete it; for power in the industrial world tended to concentrate in a few hands. Instead of enlarging popular liberties these few joined with the royal and aristocratic classes to keep the remainder of the people on a common level of helpless servitude. The powerful classes united to control the fate of the laboring classes and could oblige them to accept the smallest reward for their labor on which they could contrive to live while they themselves appropriated the mass of profit. Republics, Communes and Free Cities, in general, gave up independence, in the course of time, to concentrated authority. It was the aristocracy of commercial wealth that so bravely and successfully resisted the whole power of Spain and established the United Netherlands; but, independence secured, they did not tend toward a true democracy and drifted back to a centralized government. Switzerland maintained an imperfect republic from its citizens being largely agricultural. The lower classes were united with an aristocracy which engrossed a large share of power in the government.

In colonial America most of the inhabitants were agriculturists, and so the citizens of the States have ever continued to be. That this has continued to be so has been chiefly due to the Valley, and the breaking down of class rule in America has hastened, by centuries, the political enfranchisement of the world. The Valley yielded its wealth to the laboring millions. The farmers who fought through the war of the Revolution and framed the institutions of the new nation allowed the widest latitude to acquisition and political influence; so that personal independence, intelligence and wealth, first of all countries, became the inheritance, in the United States, of the producing classes, and, from its larger numbers, of the class engaged in agriculture. The nation grew into greatness and power from free agriculture as a principal base. The significance of the result is illustrated by the recent history of France. Its land laws were changed during its terrible revolution, and its peasants gradually became proprietors. In the course of time prosperity and intelligence spread widely among the people. Its ability to bear reverses, from this fact, has recently been the astonishment of the world, and all its monarchical parties combined could not overthrow a republic which sprung up in the crisis of the greatest calamity of its history.

The most hopeful feature of the America of the future is the general tendency of the number of land holdings in the United States to increase. The cases in which large accumulations of land are made by individuals are exceptional. It is, as a rule, the small or moderate sized farms that are most profitable. Too much land is apt to ruin its owner. As in all other things, so in this, the Valley is impartial and promotes general progress. As if by a settled law, it has uniformly discouraged monopolies, nor does there seem to be any reason to suppose there will be a change in any future which can now be foreseen. The South lost its "Cause" for disregarding this principle and allowing its agriculture to favor a kind of monopoly of the soil and its productions by a continually decreasing class—that is relatively decreasing. Natural law has a firm control of the Valley and of the political economy of the nation through it. It demands free labor, declines to encourage a servile class to develop its resources, and, if labor must be hired, requires that it be honest, hearty and interested. These tendencies, founded in the general situation, are far better than agrarian laws and fairly assure the intelligence and independence of all future generations. The farmer leads a life too healthy, makes his gains too naturally, is too self-dependent to become corrupt and the class will, undoubtedly, always be strong enough to control the corruptions of the other classes.

Agriculture has always been the ruling industry in the country by the amount of wealth it produced, and notwithstanding the immense development of other industries, it has ever kept its distance ahead of them. As the summaries of production have been carefully compiled only in later years, the point may be illustrated by studying the data of foreign exports for the last fifty years. Between 1825 and 1830, the annual average of agricultural exports was $50,500,000.

Other exports were inconsiderable and continued to be so even down to the present, never rising much above twenty-five per cent and usually falling much below it. Lately, since mining and manufacturing have developed to unusual proportions, the values they send abroad by many new channels are still less than twenty per cent of the whole. In 1874, agricultural exports were valued at $548,300,000 — nearly tenfold the earlier sum. In 1875 it was $478,700,000 ; yet this smaller sum was equal to four dollars for every acre of land improved in the Valley.

The amount of export per head of the whole population of the United States was $4.20 in 1825, and in 1875 more than double that amount for the vastly-increased population, while the annual average of export from 1870 to 1875 was about $16 per head of all the population of the Valley, or an average of about $70 for each farm in the Valley.

Cotton, though increasing sixfold in amount since 1830, then formed fifty-five per cent of all the exports. In 1874, it was but 39 per cent. The Valley States produce four fifths of all the cotton and more than the amount exported ; and, since the agriculture outside the Valley does not supply the population of those regions, we may consider all these exports as being virtually from the Valley.

Agricultural exports to foreign countries have steadily gained on the increase of population in the whole United States by an average per head of about one dollar and twenty-five cents for each ten years since 1825; and we have reason to believe that the increase will be still more rapid in future. The requirements of the populations of Europe beyond their home supplies of food increase year by year. Steam and the telegraph have consolidated the business of the civilized world, and a strong competition requires that, for a complete and permanent success, the great mass of each of the industries shall be carried on chiefly in the region most favorable to it, and where the facilities are so superior that the largest quantity may be produced of the best material and at the cheapest rate. As the Valley is the locality where the most important foods can be produced by the largest use of machinery, and in unlimited quantities, it is sure of supplying the increasing demands of the general market.

The proportion of population gathered into cities—and therefore withdrawn in nearly the same ratio from agricultural occupations—has steadily increased, in Europe and in the United States, during the whole course of the present century. In 1800, about one thirtieth of the people of the Republic lived in cities; in 1840, one twelfth; in 1850, one eighth; in 1860, one sixth; and in 1870, more than one fifth. The use of improved agricultural machinery and implements vastly increases the power of production while allowing the proportionate number of producers to diminish.

This tendency has greatly aided to solve the problem of the Western farmer and will continue to do so by the accummulation of a non-agricultural population in it. It is not probable, however, that this state of things will continue when the country and the world have adjusted themselves to the new conditions introduced by steam machinery. They diminish the comparative numbers required in all the industries and probably a fairly stable equilibrium will soon be reached, and it seems not improbable that reforms in economic and social science will ultimately reduce the unhealthy concentration of hundreds of thousands of people on a few square miles. When the laws of material prosperity are well understood and in full operation there will be abundant opportunity for progress in sanitary science. The agricultural population will then increase.

The product of all the mining industries in 1870 was about $152,600,000, and probably rose later to $200,000,000 or more; while agricultural products reached very near $2,500,000,000 and later, probably, to fully $3,000,000,000. All the mineral treasures, therefore, were but one fifteenth of the agricultural in value, nor is that proportion likely to be exceeded. Coal, iron and many other minerals will be produced in ever-increasing quantity, but the gifts of the soil are very sure to grow in equal ratio. All the precious metals produced in the United States since 1848 have been estimated at $1,500,000,000, or about one half the agricultural income of a *single year.* The best gold mine is the soil of the rich and beautiful Valley.

Manufactures furnish a large class of growing industries which produce enormous results. They, however, use the materials of the mines and the products of the soil which do not nearly double in value, on the average, in the change they undergo. The value of manufactured articles, in 1870, was $4,230,000,000; of this the crude *material* was worth $2,480,000,000; leaving $1,740,000,000 of value added as the true product of manufacture. As that estimate was made in a period of exceptional prosperity, of money inflation and high prices, we may probably be justified in considering the annual average for the decade following 1870 as $1,500,000,000—not greatly exceeding one half the results of agriculture.

In the new era, so full of enthusiastic enterprise, that followed the stress and strain of the civil war, American genius and skill proved themselves, in the line they followed, superior to the long and minute training of the European artisan; and the generous soil, with machinery and railroads to reduce the costs of production and transportation, enabled America to greatly enlarge her trade with Europe. The increase of exports, in the ten years following 1868, over the previous decade, was *one hundred and fifty-three per cent*; and of the $680,680,000 of entire export in the last year of this decade $592,470,000 were agricultural products, leaving less than $90,000,000 as the export of manufactures and other materials, or less than fifteen per cent. Yet, manufactures are so largely supplying our own country that less and less are imported every year.

CHAPTER XII.

COMMERCE ON THE RIVERS AND LAKES.

No large region in the world has been so favored as the Mississippi Valley in natural commercial highways except the countries lying about the Mediterranean sea. There the character of the outlines, the relations of the regions to each other, and the general peculiarities of the separate countries, in themselves, indicated that it was the office of the water highway that linked them together to promote the mutual intercourse of numerous small nations and thereby favor their progress in civilization. It separated them as well as joined them; it formed a community of nationalities which were to learn from and stimulate each other. It did not favor the formation of a single nation out of the whole. Contact could not be close, intimate and permanent enough for that. Yet, the commerce of the great sea, bordered by three continents, brought about the unity and progress from permanent diversity of elements that the times and the interests of humanity demanded.

The connections instituted by the water highways of the great Valley tended to unify the human development and its material progress. The united river system, the level surfaces and gentle slopes made it impossible to separate the interests of one section from those of others or allow isolation. They must mingle as do their waters. The great interior seas of the northern border, with their eastern outlet, pointed significantly to community of interests and close relations with the Atlantic Slope, and to commerce with Europe. The whole character of the northern basin of the Valley both adapted it to such relations and invited the immigration of the vigorous nations of the temperate climate. It offered them the occupations, the climate and the products with which they were most familiar, which promised them the largest degree of comfort and the greatest measure of prosperity. That which had been proposed by nature did not fail to be realized in history; the isolation produced by distance and intervening wildness gave the desired continental, or peculiar American, tone to the population by the vigor with which this fine region reacted on the pioneers; and eastern relations then became the predominant ones with the upper Valley. After the Erie and Welland canals had opened the channels to Atlantic ports commerce from the upper Ohio and the Northwest flowed powerfully in that direction, and the railroads were afterward a marvelous success because it was the natural direction.

This course of the commerce of the most fertile and temperate part of the Valley weakened relations with the southern basin remarkably. It left the South, with its unthrifty labor system, almost to itself. Had Florida been left off the continent the comparative fate of New York and New Orleans would have been different; and a similar result—perhaps a more significant one—would have followed had the Alleghanies continued their full development through New York and confined the waterways of the northern Valley to outlets by the Mississippi River.

Thus, the Valley has two parts with an important difference in their relations. Historical events, or the great industrial growth of the free States, developed the Northwest very much sooner than the lower, or central, Valley. Its value was apparent, from the first, as the most promising field of labor mankind had yet inherited, and the thriftiest and most intelligently industrious of the nations at once set to work to make the most of it. The railroad came to the help of steam at the right time and pushed its growth to the most remarkable height.

But the course of the streams and the relations produced by the Gulf, thrown into shade for the time, must assert their power sooner or later. It was the misfortune of the Southern Confederacy and its labor system that the lake system and the railroads rendered the upper Valley, with its great preponderance of growth on the Northeast, tolerably independent of the Mississippi and the Gulf. Had the lower Valley, at that time, opened the sources of her power and wealth as fully as the upper the result must have been more or less different. The misfortune of having slavery in the South, and the want of development in the countries with which the Gulf naturally associated it, left it weak in population and resources. Its hour has not, even yet, come, and the commerce of the rivers has given but a faint prophecy of its destiny. It is only a question of time, however, which the force of natural relations renders absolutely certain.

The great and sudden development of the railroad system broke in upon the slow movement that, between 1804 and 1850, was pushing forward the interests of the lower Valley and deferred its rise to its due prominence at least half a century. The general data of commerce on the lakes and rivers for different periods are very expressive.

The whole number of steamboats built for the western and southern rivers, from 1819 to 1829, included a capacity of 56,000 tons. In 1817, all the boats then floating the trade of the Ohio were estimated to have a capacity of 2,000 tons annually. The capacity must have been 70,000 in 1830. The trade on the Great Lakes was chiefly connected with furs or the transport of goods for Indian traders, prior to 1825, when the Erie canal opened a channel for the transit of commerce to the Hudson River. About 20,000 tons of carrying capacity was then employed for some years, chiefly in the transport of emigrants and their goods to the regions near the lakes. The commerce of the lakes and canals began, after 1835, to grow rapidly. The Ohio had been connected, by two canals across the State of that name, with Lake Erie. By 1840 the State of Ohio exported, by canals and Lake Erie, nearly

4,000,000 bushels of wheat, and in 1850 near 12,000,000 bushels. In 1842 the steamboat tonnage of the lakes and rivers was 126,000, and including flatboats, barges and sailing vessels about 150,000. The steam marine of the lakes and rivers, in 1851, was reported at 765 vessels, with a tonnage capacity of 204,725. The ocean coast (Atlantic and Gulf) steam marine at this time comprised 625 vessels, of 212,500 tonnage capacity. The values transported on the lakes in 1851 were, by careful estimate for that year, stated at $326,590,000. Estimates for the trade of the rivers of the Valley, for 1850, made it amount to $350,000,000. This would give the entire amount of lake and river trade, in 1851, at very near $700,000,000.

As no absolutely accurate figures were obtainable, in those days, the amount of values transported can only be approximated. The perfectly free and unembarrassed internal commerce of this happy region enjoys a rare immunity from government interference. The amount of commercial exchanges has been made note of, however, by boards of trade in later times, and by records of tonnage transported on railroads. Values of property are, however, matters of estimate still, although extended experience has given them fair accuracy. At this time railroads entered largely into internal commerce and quite changed the fate of waterways—both river and lake.

In 1876, the amount of property annually transported on railroads in the United States was estimated at $10,000,000,000; that conveyed in vessels on the lakes and rivers at $750,000,000; and on canals at $500,000,000; which carries up the sum of the values transported on these internal public highways to $11,250,000,000.

This intimates that, on the whole, the commerce of the rivers and lakes continued about the same for twenty-five years; the entire immense gain during that time being absorbed by the railroad system. For this there were many reasons. The capacity of water transport was limited at the eastern side of the Valley by the necessity of using canals; greater speed and elasticity of accommodation was found in the railroads, combined with great cheapness where an immense business was concerned; only that system could accommodate trade at all seasons; and the bars at the mouth of the Mississippi, the heated waters of the gulf, and the perils of the Atlantic coast, with the length of the route, turned the vast products of the northern Valley eastward by rail.

Other things being equal, water transportation must be cheapest for gross freight which is not required to hurry. The value of all the shipping required to accommodate a foreign commerce amounting annually to about $1,300,000,000 has been estimated at $200,000,000; while the cost of all the railroads, conveying values ten times as great, is stated at about $4,500,000,000, or more than *twenty-two* times as much, and the annual losses and repairs required are many times greater in proportion. While there were large margins to permit disregard of this greater dearness of railroad transportation and other imperative reasons for overlooking the water routes, the rivers and lakes were necessarily neglected. It is, however, apparently but a question of time when their fullest use will be resumed.

It is a constant law, arising from the imperfection of human wisdom and foresight, that business shall tend to lose its equilibrium—to fall into excesses that derange it greatly. There is another law, however, that takes care for its readjustment from time to time. It is like machinery that should be in the long run self-adjusting, but permits disturbances to accumulate to a certain point before the restorative process is commenced. These periods of readjustment of disturbed balances are commenced by what is called a financial crisis, and while the restorative work is going on the machinery moves languidly. It usually requires some years of depression to conquer the difficulty, but when it is overcome there is a new series of situations; harmony is more exact and a fresh period of great prosperity follows. During the periods of oscillation, the particular laws more especially violated become clearer; men learn what they are and how to avoid their penalties, and so progress goes on. In due time these disturbances will become more rare and, perhaps, in the distant future will cease altogether.

There has been vast loss on railroads in the Valley because of their excessive cost and the inability of their business to meet, immediately, all the conditions of corporate prosperity. Greater economy will be employed in the end, and they will, perhaps, be confined to the kinds of transportation that will pay best. Yet they now pay in some form and public aid comes, very largely, to the rescue of individual capital. But a gradual revision of methods and change of economy must be made when large new sources of wealth cease to be found and waterways, which transport in larger masses with less capital and cost for repairs, will lend all the aid to commerce of which they are capable. The amount of trade movement, vast as it now seems, is but a trifle to what it will be in years to come, and while railroads will continue to multiply, they will require the aid of every available water channel to keep the passages to and from the Valley from choking up.

It is highly probable that the true growth of commerce on the lakes and rivers has not yet commenced. From 1820 to 1850 it was a mere trial; after 1850 it was continued as a collateral of railroad transportation, and so it still remains. Its future may be supposed to have the massiveness and grand proportions which the lakes, the rivers and the Gulf bear to the Valley whose uses they were designed to serve. The uses to which natural forces were destined may lie unimproved while the corresponding development of mankind and their interests fail; but still these forces are a prophecy of what is yet to be, and their time of service will ultimately come.

These valuable natural channels will some day bear the heavy burdens of commerce and the railways will transport its lighter, more costly, frail and less bulky materials, and collect from the interiors, to the streams, the general fruits of industry. All obstructions in the river channels will be set aside, ample outlets from the lakes eastward will be provided, and scores of billions of value in merchandise will be found floating out of and into this fruitful region.

But this great result has still, apparently, to wait for generations before it can be fully realized. The South must reach her natural development—so long delayed; the West Indies, Mexico, the Central and South American States, must reach the degree of general prosperity, of social order and industrial activity assigned them by the resources they can command; the rich traffic of the Pacific and Eastern Asia must pour through the ship canal which is to join the great ocean to the Gulf of Mexico. When all this great industrial development has been acquired in the neighboring countries the Mississippi will, perhaps, be too small for the vast burden of values with which the immense trade then existing will have to deal. The passengers, the fruits, the delicate goods and materials required in haste, will then seek the railroad; but the river will float an unimagined quantity of the more solid results of agriculture and manufactures to the sea.

The 9,000 miles of navigable streams, the 3,000 miles of lake shore, and the long line of Gulf coast, will then serve the same purposes of foreign commerce that the Atlantic and Pacific coasts do now. These waterways, so large and long, will then join the interior of the continent with the active world without, as they were designed to do, and the center of the Valley will be, industrially and commercially, the center of the country.

CHAPTER XIII.

DIRECT FOREIGN COMMERCE OF THE VALLEY.

The Mississippi Valley has been the providence of the American Republic. Binding it together through a common ownership, common settlement and a common development of its vast wealth, all classes in the East, but especially the manufacturers, the traders, the capitalists, and the shrewd speculators, have been enriched by it. Few walks in the general business life of the East have failed to draw a large part of their profit, directly or indirectly, from the overflowing abundance of this region. The people of the West supplied cheap provisions to the manufacturing classes and bought their wares with the price heightened by a protective tariff. Merchants imported foreign goods, re-sold them at a profit in the interior, and bought agricultural products to export—with a profit. Capitalists and bankers invested and loaned to reap hundreds of millions in interest and the rise of values.

But in no way has the country been more benefited by the Valley than in its contributions to commerce. The bulk of the exports which were to pay for imports have been from the northern or southern Valley. The cotton, which long formed fully one half of the exports, was largely produced in the lower Valley, and half the remainder of the values exported was from the grain regions of the West. In more recent times, manufactures enter largely into export trade; but the increase in articles of food has gained in still larger proportions. The most of that which produced balances in European exchange, or drew money from abroad, was due to the Valley.

So great has been the favorable reaction of the West on the East by the impulse given its manufactures, commerce and trade, that Eastern cities have increased in population since 1830, at about one half the ratio of the cities of the West, although millions annually emigrated from East to West. Almost one half the capitalized wealth of the country has accumulated in the Eastern and Middle States, although they have but little over one fifth of the population. As they are owners of much property in the Valley the difference is much greater than appears from the census.

The surplus produce of the West has gone to the East and through it to foreign markets and paid a heavy profit to the East for handling; this profit has been reinvested in, or reloaned to, the West at extraordinarily high rates with the effect of compound interest. The West has been in so great a hurry to lay its foundations and reach its true productive period and the advantageous condition of an old country that it has not stopped to calculate and bargain, in the interest of economy, for its own section. It has hastily taken all the aid it could get at whatever usurious rates. By so doing it has gained many years of progress but poured the larger part of its earnings into the lap of the East. The child has richly endowed the parent in this process; it now remains for it to attend more shrewdly to its own interests.

This it is partly prepared to do by producing a considerable portion of its own manufactures, and the next step is to carry on as much of its own commerce as possible. As an interior region, it can do this only in part, the superiority of the Atlantic ports being absolute; yet it has great outlets on the north and south which have been almost unused for purposes of foreign trade. It has furnished about four fifths of the exports of the whole country and will, perhaps, keep up that proportion; if it do its own business on its own capital it will, in time, become as superior in accumulated property as it is in population and compass of resources.

The changes that are preparing to this end lie partly in the transfer of manufactures which enable it to accumulate floating capital; partly in the opening of the South to general industry and development by putting away the slave-labor system; and partly in the development of the countries nearest the Gulf ports and the mouth of the great river to such a degree that profitable exchanges can be made on a vast scale. Other changes lie in the future and will, apparently, be wide-reaching. Among these is probably a resuscitation of direct commerce with Europe from the great lakes and from the river.

The St. Lawrence was made to be used, and the Upper Mississippi, the Missouri and the Ohio were not united in the center of the Valley, forming the broadest commercial highway, without an important purpose. These channels, both leading to the outside world from a region that, more than any other on any continent, is entitled to be called the World's Granary—are the cheapest and most natural outlets for the boundless supplies of food the world needs, and the requirements of the Valley farmer can never be fairly met till they are fully in use.

When an adequate population has developed all the natural industries of the Gulf States, the massive volume of excess will press southward to the sea. The channel of the Mississippi River will be improved; all the 20,000 miles of interior water-ways, formerly said to be accessible from New Orleans, will be laden with the rich products of an inexhaustible soil drawn from it by the wise industry and economy of fifty or a hundred million agriculturists; the then well-ordered society of the rich islands of the Gulf will supply material for an immense trade; the mines and plateaus of Mexico will flourish as now do those of California and Nevada; the trade of the re-organized Central and South American States will reach fabulous sums, and no unimportant marine tonnage will fetch and carry between St. Louis and London.

The energy of the Anglo-Saxon race is supplemented, in America, by a most valuable inventive genius, and intelligent skill in reaching the broadest and highest ends in every line of activity. The Valley has received a large share of the very best part of this special ability and affords the highest degree of stimulus in every way besides giving it the largest field. When the wide areas of the Valley itself are well explored and all its resources are fully opened the energy of this race will find ample scope in the basin of the Gulf of Mexico, south and west of it, and by an isthmus ship canal with the vast trade of the Pacific. The Spanish Americans will not be left alone to work out, slowly and painfully, by their creole and native races, the high civilization and great industrial prosperity for which their countries were formed. America is as aggressive as is England; but its aggressiveness is directed against false systems of thought, of industry and economy. The vast activities that have done so much for the Valley itself, in one generation, will soon begin to overflow its boundaries to stimulate and guide the thought and industry of its immediate neighbors. This activity will be to the advantage of the foreign trade of the Valley. The precious woods and valuable agricultural products of the tropical regions around the Gulf will find markets so large and profitable that Americans will work them if their careless owners will not; the great valley of the Amazon will become an appendage of the Mississippi Valley, commercially, through the Orinoco, with which its waters are connected; the trade of Peru, Bolivia and Chili will be tapped for St. Louis by the isthmus canal; and the teas, silks and spices of Eastern Asia and the East Indies will be imported directly to the heart of the United States.

Long before this system of direct connections with new fields of colossal commerce shall have been entirely opened the internal business of the country will have become too heavy for the railroad system alone, and every possible use will be made of the rivers and lakes. It may never be felt desirable, by our relatives of the Dominion of Canada, to form a consolidated political union with the Great Republic; but its material prosperity is indissolubly linked with it. Sharing with it the Great Lakes and controlling the St. Lawrence, with a vast interior continuation of the Valley beyond the sources of the Mississippi as valuable as Minnesota and Dakota, its natural industrial and commercial connections are with the Valley. The lakes and the Mississippi will necessarily be called on to bear off its surplus produce.

So great an accumulation of material for transportation to the foreign world will irresistibly press the Valley to direct foreign trade. The premonitory symptoms of this new departure are already visible, in the clearing of the mouth of the Mississippi and incipient organizations along the river for direct foreign trade. Beginnings are slow and difficult where antagonistic interests are to be set aside, but, when fairly inaugurated, the characteristic zeal and impetuous rush of western enterprise will develop them with great rapidity.

CHAPTER XIV.

THE STIMULANTS TO EDUCATION SINCE THE WAR.

Great events which deeply stir the minds of men, and especially such as awaken a new sense of power and open a brighter promise of the future, have always acted favorably on general education. They awaken a new sense of the resources lying unused in human thought. The Crusades stirred up Europe to a new learning; the discovery of America, accompanied by the conquest of the ocean and new worlds, started up innumerable schools of learning; while the knowledge and experience gained by the untaught common adventurers had something of the influence of a liberal education; the excitement, the discussion and the new experiences of the revolutionary period were a practical education to the new nation—enlarging and elevating the mind.

The civil war was peculiarly instructive and stimulating to American thought. The prolonged attention given to American theories and politics made the people more familiar with the principles and history of their own government than anything else could. They came out of the war with definite conceptions, with a lively sense of capacity and clear views of great results to be obtained. Necessity stimulated the minds of the Southern people and enthusiasm moved the Northern. A new and more stable union of the sections, a larger and more rapid progress, and a more comprehensive public and private prosperity were presented as inspiring hopes before most minds. The impulse it gave to energy fulfilled the hope; experience and reflection led to wise measures; and the absorbing attention given to public events, their causes and consequences, made the nation far more intelligent than it had ever been before. It had much the effect of an educational course on the people, drawing into action their latent mental power. Never before, among any people, was there so much reading, so much thinking, so much of intelligent conclusion from what was read and thought. The influence of the war was an education itself, in American principles and affairs, and left the people in a far higher and more favorable mental condition than it found them.

The great development of material interests that had already begun in the North and would soon begin in the South carried on this awakened tendency. Science entered on a more active career and took charge of many important departments which had before been committed to comparatively ignorant hands. The demand for thorough familiarity with some of its branches in order to fitness for positions of trust became constantly more imperative. The conduct of business on an immense scale, the precision and self-command required in the control of machinery, in railroad employes generally, and more or less in most branches of business, required, and by practice gave, a technical education and much of mental training to large masses of workmen. When acquired simply in routine practice alone it was, in itself, an education, so much breadth of knowledge, self-command and accuracy of attention and action were required. All these developed character. They did not allow the workmen to remain simply machines, so much responsibility for general results was devolved on all the individuals employed to produce them.

In this respect, the wide range of industry and activity required by the vast business of late years is of signal benefit to the laboring classes. The railroad system which employs so many hundreds of thousands of men on its extended lines, throwing each on his own responsibility for the intelligent co-operation that must produce precise results, is a striking example of the new dignity which industrial progress is conferring on the laborer. Formerly, the laborer was an unintelligent machine; all important responsibility was laid on the intelligent superintendent, and comprehensive intelligence in the laborer was not required. As labor is generalized and brought into harmony with great natural forces and laws, the laborer is required to be also a thinker; and the wider the mental range, the more accurate the knowledge, the better the duty is performed. He must not only know how and when to act personally, but how others should act that he may adjust his action to theirs. This demand for intelligence, this dividing of responsibility for results among all the employes, is a constantly enlarging process, and in the same degree develops independent knowledge, mental discipline and reliability. These imply a practical education.

At the same time the barriers to observation are being thrown down. The railroad and the steamer are making men acquainted with each other, filling their thoughts with comparisons, begetting ideals prompting to improvement; the electric telegraph and the newspaper are employed in making observations in every part of the world and in taking all men into their confidence. Every event of importance is immediately known over the whole civilized world, men take a silent view of the world's work of the day before every morning if they choose—and most true Americans in active life choose.

Comprehensive activity is more and more the rule; operations as well as observation take an ever wider range; local interests are more and more affected by distant events, and associated with many interests on the other side of the world, or in distant places. The activity of the American is naturally intense; he is absorbed in his aims and attentive to all that affects them. Therefore, the laborer, the artisan, the farmer, watch and study the direction of events that may affect their personal welfare. They read, discuss, become original politicians, financiers and theorists. Life grows intense while its sphere widens; earnestness of attention to wide relations and distant occurrences has the force of an education, or, at least, it stimulates ever larger numbers to the acquisition of knowledge and the formation of a personal judgment that imply an education or drawing out of the powers of the mind. The activities of the last generation have done much more, probably, to really educate the mass of Americans than all the instruction of the schools. They have formed a practical, impressive and very intelligible course of education. This practical appreciation of the value of knowledge among the adult population inclined them to reading, and the lively interest awakened in public events did not decline after the war. The general news was freely circulated by conversation and discussion even among those who seldom read. The newspapers published in the Valley, in 1860, numbered 2,000, and 3,000 in 1870, the rest of the country having 2,800. The annual issues of all the papers of the Valley, in 1870, was about 6,000,000 to 14,000,000 in the whole country. The whole number of copies issued in the year in the Valley was 525,000,000 to 1,500,000,000 in the whole of the United States. The East contains the commercial, the literary and the political metropolis. The writers and publishers of the East find a large part of their readers in the West—the publishing in the Valley being mainly for the supply of local wants. The enterprise of the Valley does not allow its information to get out of date.

The census marshals of 1870 found 164,000 libraries of books in the United States, 100,000 of which they credited to the Valley; but, if more numerous, they were naturally smaller by a large average. Of 45,000,000 volumes in all the libraries of the country but 20,000,000 were found in the Valley. Many of them were of recent date and more valuable to the masses of the people from having a smaller number of old books rarely consulted. Of 56,000 libraries, other than private, in the country, 24,000 were in the Valley, containing but 6,000,000, out of the 19,000,000 volumes in them all. In 1875 the Bureau of Education reported 250 public libraries of 300 volumes and over, established in various parts of the Valley since 1870, which contained, in the aggregate, nearly 500,000 volumes.

The number of church edifices in the Valley in 1870, was 34,030, with 10,346,472 sittings, at a cost of $121,300,000—the whole country having 72,000 churches, 21,600,000 sittings, and its church property being valued at $354,000,000. The newer regions of the West supply religious instruction to large numbers—possibly to some millions—without edifices specially devoted to that object. The average cost of churches in the East is nearly nine thousand dollars and in the Valley about three thousand five hundred. The Valley, as a whole, may be considered, relatively, fairly well supplied with the means of moral education.

All these instruments of intelligence are perhaps exceeded, for the purposes of the present generation, by social intercourse, by constant discussion, by the educating power of experience and observation. The study of American institutions and ideas during a period of crisis so great and interesting gave a special clearness of insight to the citizens who reconstructed it on a broader base and gave it a more perfect development and unity. In spite of all the faults they committed, future generations will look back at them with admiration and reverence, for, to them, the faults will appear comparatively small and the service they rendered really large.

CHAPTER XV.

THE WONDERFUL PROGRESS OF POPULAR EDUCATION.

When the armies were disbanded at the close of the war the expenditures and energy that had been required to support it were immediately turned to the great enterprises of peace. Manufactures, internal commerce and education gained in magnitude and force in a few years quite as much as in the entire past career of the Republic. Between 1860 and 1870 the capital employed in manufactures increased from one thousand and nine million dollars to two thousand, one hundred and eighteen million. From 28,000 miles, in 1860, the lines of railway open to traffic had increased to 62,000, in 1872, and, in 1870, the values transported in the internal commerce of the country were double those of 1865. The property valuation of the country ascended from sixteen thousand million dollars, in 1860, to thirty thousand million in 1870, notwithstanding the vast destruction and expense of the war and throwing out of property valuation nearly four million of the colored population of the country. The comparison of funds devoted to educational purposes is still more striking. In 1860 the expenditure for schools of all kinds in the United States was thirty-four million dollars; in 1870 it amounted to ninety-five million.

When it is considered how vast were the sums withdrawn from the available capital of the country by the war, and how many embarrassments, that might have been expected to cripple its progress, sprang from that wasteful contest, it will not seem exaggeration to say that a new era of unaccustomed strength and rapidity of development dated from its close. The effective force of American ideas, enterprise and energy seemed to have been at least quadrupled. There was a rush of prosperity for the first eight years, which placed the country in a new position. The rills and modest streams had suddenly expanded into mighty rivers. If they then ceased to overflow their sources were not dried up; they still sent forth steady and powerful currents. The talent and intelligence of the country had been at school for ninety years and now first began to reap the full fruit of their studies and experiences and to display the character and vigor of their manhood. The apprentice had become the master.

Americans have been reproached, without good reason, for extreme devotion to their material interests. The mistake arose from the circumstance that earnestness and progress in this field were more apparent than in the higher one of culture, to make a striking showing in which required a maturity of organization and an abundance of accumulated wealth impossible in formative periods. These had been gathered to such an extent by the commencement of the war that, at its close, when the results began to do justice to the real efforts of the past, they assumed an imposing magnitude. This is made summarily apparent by comparison of the school revenues of some of the leading States in different sections in 1860 and 1870. Massachusetts devoted $2,200,000, to all her schools, in 1860, and $4,800,000 in 1870; New York gave $5,000,000 to schools in 1860 and $15,900,000 in 1870; Ohio and Pennsylvania each a little over $3,000,000 in 1860, and about $10,000,000 in 1870; Illinois had advanced from $2,500,000, in 1860, to $9,900,000 in 1870; Missouri from $1,200,000 to $4,300,000; Iowa from $700,000 to $3,500,000; California from $277,000 to $2,946,000; even Kentucky, wasted by war on her soil and her labor system profoundly disturbed, advanced from $1,080,000 in 1860 to $2,530,000 in 1870, and Tennessee gave $600,000 more for education in 1870 than 1860, though it then exceeded $1,000,000.

This increase of school revenues was attended by an improvement in educational systems which doubled the value of the outlay. At every practicable point improvements were introduced. Better methods were employed whenever it was believed such had been devised; teachers were selected with more care; high schools, academies and colleges for supplying higher grades of instruction were multiplied, or more liberally supported; agricultural colleges were founded; schools of art, of technical and professional science; schools for the blind, for the deaf and dumb, and for every special class that required separate attention, sprung up on every hand. Schools for the colored people were established in the South, embracing all grades of instruction, from the primary school to the college or university. No field where intelligence could be trained was overlooked.

The new settlements and the Territories were not deprived, as formerly, of the advantages of education until they had gained a considerable population. Schools were established wherever a few pupils could be gathered. The interest of the people in the intelligence of the future citizens of the Republic was everywhere active.

In the older and more populous States of the Valley school organizations met with a steady success, probably not exceeded anywhere in the world. In the newer regions more time was required to produce results commensurate with the outlay and the efforts made ; but everywhere the welfare of the future was secured so far as efforts in this direction could secure it. Schools were the first to feel the pulsations of prosperity and the last to share pecuniary adversity throughout the country.

The number of schools of all kinds in the country, in 1860, was 115,224, and in 1870, 141,629—a gain of 26,000. In the Valley, from 63,700 in 1860, they increased to 83,900 in 1870—a gain of more than 20,000. The number of pupils in attendance at all the schools of the United States in 1860 was 5,477,000 and in 1870, 7,209,000. In the Valley the increase was from 3,175,000 to 4,145,000 and in 1875 they had increased to 5,200,000 in the Valley and 8,950,000 in the whole United States.

In 1860 the expenditures for schools of all kinds in the United States was about 34,700,000; in 1870, $95,400,000. In the Valley the expenditures increased from $16,900,000 in 1860 to $48,600.000 in 1870. The income of schools for 1875 is given with accuracy only for the common school systems of the States and territories. The common school income of the whole country in 1870, was $65,400,000; of this, $36,900,000 belonged to the Valley.

In 1875 the Valley had $49,000,000 for common schools and the whole United States $88,600,000. This was a great gain in the Valley considering the many difficulties after 1873. It had not the reserve resources of the older region but did not, on that account, pursue its educational plans with less vigor.

Of 62 Normal Schools for training teachers, in the country, in 1875, one half, 31, were in the Valley ; and of the 29,000 students of the art of teaching, about 16,000 were in the Valley—considerably over half. The funds, however, were not equally divided, $280,000 being spent on them in the Valley to $400,000 in the rest of the country. So, of the professional and technical schools of the country those of the Valley had an increase less than $8,000,000, while other parts of the country gave theirs almost $10,000,000. The East had the advantage of large fortunes and liberal bequests from individuals not enjoyed to the same extent in the Valley. Yet, the East furnished to the West the teaching of its experience, the culture of its scholars, and unnumbered benefactions and loans of its capital for the great enterprises undertaken. The East has ever been the banker of the West. It has matured ideas, methods and men, and all have tended to flow westward ; if it has grown rich in commerce with the West, its gifts and loans have made many things possible in the Valley that, without it, must have waited for a better day.

The ambition to found new institutions in the new soil of the Valley has sometimes been excessive, and more adapted to the necessities of the future than the present. Of 365 colleges and universities in the United States, in 1875, 230 were in the Valley. Of the 76,000 students in them all 34,000 were in the Valley; yet, of the $5,000,000 income enjoyed by them all, the Valley had but $1,800,000. Such differences will disappear with the rapidly increasing wealth of the Valley. Its outlined organizations, however numerous now, compared with the funds provided for their support, will all be required presently. Like the first Fathers of the Republic, the inhabitants of the Valley are working for the future, whose intellectual welfare they do not by any means neglect in their eager pursuit of present material advantage.

It is a mistake and an injustice to suppose that the Southern, or slave, States of the Valley did little for the cause of education. In 1860, out of the 34,500 schools of all kinds in the Valley, 18,900 were in slave States, and they spent on them, in that year, $6,600,000—about one fifth of all that was spent in the whole country for education. Common schools were well organized in the Northwest, but efforts in that direction were comparatively ineffectual in the South. Louisiana, with but 350,000 white population, had a larger income, provided by her Constitution, to spend on her common schools than Illinois, with 1,700,000 whites. Yet the results were small compared with Illinois. The education of the white population was general in the South, although under different modes, and wanting largely in the vigor of organization and in the earnest persistance of purpose that combined the whole population of the free States in an active and liberal support of plans of universal education.

There was a singular tendency toward improvement, and the years of the war, so full of excitement and immense sacrifices for the support of the General Government, left educational systems in full progress in the free States. It would be difficult to estimate the effect of this immense progress of fifteen years; perhaps it would even be difficult to over-estimate it. It is true that education is only begun when the young are graduated from the common school, the academy or the college; yet it is the first step, and a great one. It may fairly be considered, as a rule, to have transferred the mental powers of the individual from the latent and passive to the active state. In a multitude of cases this does not at once appear, and may not for generations, possibly; yet it is an eye opened, a horizon enlarged, a tendency given. Definite ideas on a multitude of subjects are formed, and the key to the domains of knowledge is put into the hands of the young. The newspaper is placed before him, a thousand occasions for using his acquisitions arise in the active life around him. The germs of intellectual power often find a poor soil, but some of them are sure to spring into life. Unfavorable circumstances may turn the pupil to vice or wither all that springs up; but these will be exceptional cases. It is a new help to rise in the world, confers a sense of respectability, and if he does not improve on his basis of school education he will be more anxious that his children should learn. It is a great step gained, for the lowest.

For multitudes it is the broad base on which to build a new career ; the impulse which finally turns the *machine* to the *man*. Popular education is an arm reached down to each social grade to draw it up to a higher level. It is a lever to raise the world of men to a better life. Social influences, the exercise and discipline of business, innate aspiration, stimulated more and more every year by the expansive progress of the times, are so many forces to work this lever. The whole result, in the course of generations, must be incalculable.

Improvement of methods will go on until the value of results from the same efforts and expenditures will be perhaps increased a hundred fold, while the efforts and expenditures themselves are increasing by a large ratio. In 1873, the income of the common school system was a little over $80,000,000 ; in 1875, in spite of the great financial difficulties of the intervening time, they increased by over $8,000,000 while, probably, the value of the whole outlay had been increased by a much larger per cent. Teachers yearly become more intelligent and efficient by a large general average.

Not one generation has passed since the interest in popular education became so general as to result in the formation of the systems which have been seen to expand so greatly since the close of the war. A large part of the more important and impressive results are still very partially worked out; and the generation that has been most largely benefited has not yet replaced that which grew up under far less favorable circumstances; therefore the general progress of intelligence that has been gained is only partially perceptible. A large proportion of the people who were scattered over the West and South when almost no facilities for the education of their families had been introduced still live. Their children, who had few advantages compared with those now furnished to *their* families, are in the prime of life—of a life, on the average, most energetic and successfully progressive. When they give place to the youth now receiving superior instruction the law of progress will declare itself with still greater distinctness.

Let the educational deprivations of the pioneers east of the Mississippi be compared with the attention now given to popular instruction in new States and Territories. What the New England pioneers first undertook in Ohio, and only partially succeeded in, is carried out effectively in the new regions of the present. Usually the best and most expensive building erected in Kansas, Nebraska, and other new settlements of the western border of the Valley, is a school house. In all the villages and towns of a few hundred scholars, graded schools, taught by carefully trained instructors, are in full operation; normal schools, libraries, newspapers, the telegraph and railroad, unite to bring all the impulses and light of the most favored communities to bear on the young as well as the adult. They are still in the center of civilization and feel all the powerful pulsations of its stirring life. There is now no frontier where life and thought can be arrested and stagnate. How great must be the sum of intellectual power added in the next twenty years when growth is universal and the various implements of learning and practical discipline are increased tenfold, both in number and comparative efficiency, over those of the last twenty years?

Education meets with more difficulties, in the way of effective organization, in the South, because it is comparatively poor and it has four millions of freedmen to instruct. But the opening stage will soon be past, organization will get into the best working order, and progress acquire a momentum sufficient to override all difficulties. The significance of the general educational situation is very great. It certainly promises an extraordinary future, such as has seldom been imagined but by the brain of an enthusiast. Culture is a living, growing organism. It has become thoroughly naturalized in every walk of life in the Valley and will bring forth in as great abundance as the soil of the prairies.

CHAPTER XVI.

THE GROWING BREADTH OF RELATIONS TO THE OUTSIDE WORLD.

The actual usefulness of the resources of the Valley, and the degree in which they will become sources of colossal wealth to its inhabitants, depends on the development of other sections and other nations in different lines. As these become wealthy and great in other ways, and require and are able to pay for the excess of its special products, those products will acquire value. If others do not need, and will not buy, at remunerative prices, what it can furnish beyond its own consumption it will still be poor in the midst of its abundance; its activity will be checked; and it will be unable to purchase the thousand things it does not produce and which enter so largely, in modern times, into the list of necessities, comforts or luxuries of life. A due estimate of the Valley, therefore, requires some knowledge of the character and degree of development of outside regions.

The Eastern or Atlantic States bear closer and more important relation to the center of the continent than any other region. At first, they contained the nation; for more than half the period of its existence they have held the great mass of its population and have always held the larger part of its surplus wealth and owned and conducted the mass of its commerce, trade and manufactures. It has been only within a few years that this central section, so long and laboriously occupied in laying foundations, has so far succeeded as to begin to accumulate on a large scale.

The East, by its position facing Europe, has always had a substantial monopoly of commerce and must always possess eminent advantages in that respect over the rest of the country. The constant growth of its commerce is secure. The southern and central Valley will naturally obtain a considerable share of that branch of activity, by the gulf and its great river, but it will be chiefly a division of the growth of commerce, immense in itself as the South develops its untouched resources and the markets of the world enlarge; but small compared with the upper Atlantic regions—placed directly between the grain-growing States of the Northwest and Europe, with the immense advantage of the chain of great lakes and easy railway communications. The commercial superiority of the Atlantic region will always make its prosperity a matter of great interest to the upper Valley.

But it is still more eminent for its manufactures than its commerce. We have seen that a considerable degree of transfer of some of these industries to the Valley began between 1860 and 1870. Western Pennsylvania and Ohio together produced four fifths as much as Massachusetts, in 1870, and Illinois and Missouri together about the same, and, united, these four Western regions produced one fourth more than New York; but that did not prevent a colossal development of manufactures in the East during that decade.

The products of the manufactures of Massachusetts, New York and Pennsylvania rose from less than one thousand million dollars' value in 1860, to more than two thousand five hundred million in 1870; and at the last date they produced considerably more than half the manufactures of the entire Union. Transfers of much importance, of some of these industries, are likely to be made westward and the Valley will soon far excel the present manufactured values of the whole country; yet it can not be questioned that the East will always maintain a great superiority. America is beginning to manufacture for the foreign world on a larger scale each year; and the advantages of vicinity to the great commercial ports, of vast investments made and tendencies produced, will preserve to it the lead in this direction probably in all the future.

The East has its agricultural greatness, also. In 1870 the value of farms in New York was greater than that of any other State in the Union by more than two hundred and fifty million dollars; Pennsylvania was only slightly exceeded by Ohio, and exceeded Illinois by eighty million dollars; and the agricultural interest in the East, generally, is one of great magnitude. But it will be remembered that one third of Pennsylvania is in the Valley, and that much of New York is the eastern part of the Great Lake system by geological origin, as well as by position and soil, and that system is an essential part of the Valley. Nor is it to be forgotten that, having the great advantage of lying near the centers of population and wealth, these States have already reached a comparative maturity of agricultural development, while most of the Valley proper has, as yet, produced only its first fruits and given but a hint of its capacities. While, then, the results of agriculture in the East will be comparatively stationary, the Valley agriculture may be developed to any desirable extent for centuries to come. The proportion of food produced in the East to its population will constantly diminish and its relations to the welfare of the Valley enlarge in the same degree.

By its commercial and manufacturing superiority it must gather a dense population, generally prosperous, which will furnish an ever larger market to the Valley. As, therefore, the Valley will be ever a large customer of the East so it will find in that section one of the largest sources of its wealth. They complement each other.

The mining regions of the Pacific section are comparatively new, but had the foundations of their Anglo-American civilization laid with surprising speed under the stimulus of gold discoveries. These were enlarged and consolidated by the construction of the Pacific Railway, connecting them with the East, which was completed in 1869. They decreased in the product of precious metals from sixty-five million dollars, in

1853, to thirty-six millions, in 1872 and 1873; but the great quantity of these metals deposited through the whole range of the Rocky Mountains becomes more evident as they are more carefully examined, and they may be relied on to furnish a constant supply for centuries to come, and also vast quantities of more common, but more useful, mineral products.

The product of gold and silver in this whole region, including Colorado, Montana and westward to the Pacific, was estimated to have amounted, between the years 1848 and the commencement of 1876, to one thousand, five hundred and ninety million dollars. Yet its true mining wealth must be considered as but slightly drawn upon. Already more than a million inhabitants are spread along the Pacific Slope or scattered through the valleys and gorges of the mountains. San Francisco will become another New York—the metropolis of a populous region and numerous States, the center of vast commerce with Japan, China and the East Indies; other railways will join this coast with the Valley and with the East; and, in time, its commerce and the products of its mines will become, perhaps, almost as important in value as the products of the East. Its agricultural capacities are not the least of its resources, as yet. In 1870 the value of the farms of California amounted to $141,000,000, and their products to about $50,000,000, increased to over $54,000,000 in 1875, exclusive of its fruits, while its live stock was then valued at more than $45,000,000. Its entire income, from all these resources, must have amounted, in that year, to $65,000.000—the largest sum it ever produced in one year from its mines.

Yet, great as is the agricultural capacity which these statistics indicate, commerce, manufactures and mining will gather a great population of non-agriculturists, whose demands for food can not be supplied by the utmost resources of all the lands of those States which can be cultivated with profit, great as future results are certain to prove, with irrigation. In time, the abundant food products of the Valley will flow across the mountains to its commercial centers for the use of its population and for export to Asia or the islands of the Pacific. The mining industries, the forests, and the commerce of the Pacific side of the continent will ultimately raise that region to a prosperity and a magnitude of development rivaling the East; for it has a field more vast without the same rivalry from Furope. Western America will regenerate Asia, in the course of time, by its free and natural civilization, and grow rich in the process.

Thus, the Valley finds itself midway between two sections whose internal capacities and outside relations assure them a boundless development. The East has two classes of markets, whose capacity to receive from her will constantly enlarge—Europe and all the lands readily reached by the commerce of the Atlantic on one side, and those of the inexhaustibly fertile Valley on the other. The extreme West is equally favored by ready connections with Asia, the East Indies and the tropical wealth of the Pacific islands on one side, and the Valley on the other. By means, then, of these two powerful supports—these two arms stretched out east and west to Europe and Asia—the Valley makes its great superiority in its own special resources felt to the ends of the earth.

Steam and the electric telegraph have quite changed the relations of those communities of mankind called nations. From the dawn of history nations have been, in general, Ishmaelites to each other—each in a state of violent antagonism to the rest, which, as a rule, only prudence and a sense of weakness restrained. Alliances were formed to give temporary strength for self-protection or for offense. As civilization ripened in modern times, and wide-spread activities required some check to this spirit ever threatening a sudden and dangerous outbreak of war, a loose confederacy was formed, among the most civilized nations, to maintain the "Balance of Power" in Europe. It put a curb on ambition and raised strong barriers against the destructive exercise of military power. Napoleon Bonaparte defied this prudent European tribunal, and, after a contest of nearly twenty years, was finally overthrown by it.

Yet, so strong is the antagonistic principle among men that even Europe has had small success in her effort to control it. So afraid are her nations of each other, so ready to improve any favorable chance of building up their own power at the expense of others, that, in profound peace, Europe is a vast warlike camp; its armies and navies, and the interest of its war debts, exceed all its other expenses. Its war debts are too large to hope ever to pay off, some nations not being able even to pay the interest on them. With the return to first principles and natural law of the American Republic an element of reform was introduced. The United States would be the friend of all, the enemy of none, and declined to maintain a larger standing army than was necessary to protect her frontiers. The war with England, with Mexico, and the Civil War were exceptional. The principle has gathered strength even from the result of these wars; but its great gain has been derived from the development of power in the people everywhere and the corresponding decrease of strength in governments.

The chief direct instruments of this happy re-distribution of power have been steam and electricity. They have brought nations nearer to each other, have greatly multiplied relations of mutual profit between them, and have immensely promoted the development of the elements of wealth in civilized lands, while, at the same time, distributing it more equally among all classes of men. Nations no longer prosper independently. Those which have business relations with the largest number of foreign peoples are the most prosperous, and the degree of their prosperity will be measured by the extent of business done with each. This draws the nations together, increases community of interests and makes the prosperity of one the prosperity of all. They have become mutually dependent.

The disturbance of friendly relations between any two introduces a disastrous element into the business of those most distant and causes suffering through the whole civilized world.

Under this consolidation of the nations into a vast community, that member which possesses the greatest quantity of valuable products of a kind wanted by the largest number of other nations will hold the most important and vital relations toward the rest. It will "come to the front," will exert the most influence and will be the most concerned in the peace and prosperity of the world. The nation holding that foremost place at the present time is England. The annual value of her commerce much exceeds three thousand million dollars, while that of France and the United States, both holding the second rank, and nearly equal with each other, is less than one half as much for each. Their foreign commerce united does not equal England's. It is largely by her manufacturing activity that she has gained and holds this rank, her coal supplying her with manufacturing force In 1876 her production of coal amounted to 149,300,000 tons, while its production in the United States was estimated at 47,500,000 tons. But all the coal in the rest of the world is, apparently, but a fraction of that held by the United States.

While, therefore, England is the commercial and manufacturing country of the present, the United States is that of the future. England imports a large part of her raw material for manufacturing purposes, while America produces the larger part of hers—perhaps she is capable of producing all. England imported, in 1873–4, 3,149,000 bales of cotton, consuming herself 2,040,000 bales of it. The United States, in the same year, consumed 1,306,000 bales, and, in 1875, produced 4,600,000 bales. The United States, by the illimitable resources of its great Valley, must be able to distance every competitor as a manufacturing and commercial nation. England must import much of her material and food for the workmen who produce the manufactures for her export commerce

—a great burden laid on her production, which is almost entirely spared the American manufacturer. He can, in the long run, and on close competition, produce cheaper and faster than his English compeer, and has the assurance of the future market.

It was the Anglo-Saxon instinct of business sagacity, the very natural desire to be rid of a dangerous rival in their own line if it could occur without injury to themselves, that led to a large degree of English sympathy for the South in the Civil War and the disposition, indulged farther than prudence would have counseled, to render it aid; and it was the same sagacity that led the loyal States to cheerfully strain every nerve to preserve a Union on which the speedy attainment of commercial and manufacturing superiority depended. To keep the great Valley entire and joined to the East was as important to the natural development as to the political strength of the Anglo-American people.

The Valley, then, stands as the feeder, and in many respects the support, of the right and left wing of the country, giving vigor to each strong arm to perform its own special work, and adding to their commercial exports an enormous amount of its special products. The internal commerce of the country, in 1876, is estimated to have been as follows: $10,000,000,000 worth of goods transported over its railways; $500,000 on its canals, and $750,000,000 on vessels engaged in its domestic trade—$11,250,000,000 in all, more than seven times the value of the whole foreign commerce of the country, including exports and imports. Perhaps five times the value of the foreign trade was transported from, to, or within the Valley, for all which transportation its products paid. Its relations to the world of business within and without the country are already of great magnitude. England is an old country It had only the extension of its business to provide for, while the United States, being new and vast, must attend to laying, and building on, first foundations. Everything must be built up and organized from the bottom ; it could give a portion only of its attention, capital and skill to work in which energetic England was wholly engaged. It is now far advanced in preparation and may be expected to compete with England as fast as it can open markets for its wares. The magnificent results of its industry and enterprise will soon astonish the world.

When the Gulf States are well developed, and even as soon as they are in the full career toward this condition, an active and rapidly-growing commerce will make their section foremost in the country in prosperity and wealth. All the hindrances will soon be overcome.

To the full development of a successful commercial competition with the Atlantic States it is necessary that the West Indies, Mexico, Central America and the South American States should acquire political, social and industrial stability and begin a solid and rapid progress, which may be held as assured to them by the painful lessons of their past experience, by the admixture of industrious foreign blood and by the growing influence and powerful example of the United States.

Another circumstance of perhaps still greater importance will bring a flood of foreign commerce to the lower Valley. A ship canal through the Isthmus will open the Pacific to Atlantic commerce. New Orleans and St. Louis may then load their vessels for Japan, China and the West coast of America without re-shipment of exports and imports. The Valley will then be in direct relations with Europe by the St. Lawrence, with all the South Atlantic countries by the Gulf of Mexico and with all Pacific lands by the Isthmus canal.

The foreign commerce of the river system of the Valley will be a new and great relief to the overflowing products of the Valley It will not be easy, when such relations are fully established, to compel its farmers to sell, for an insufficient price, its several thousand million bushels of various grains. The storehouses and granaries will be kept comparatively free and the whole Valley will feel the stimulus of a new life. The railway problems will be simplified, the manufactures, the mining and general trade of the Valley will flourish, and, joined to its specialty, will raise the Valley out of dependence on the capitalists and jobbers of the East.

The relations of the Valley arising from its central position between the two powerful sections, each having a great specialty, and the two oceans which give it the advantage belonging to Rome and Italy at the commencement of the Christian era as a kind of center of the world, are of great importance to it, to the country as a whole, and to the other four quarters of the globe. As yet, indeed, this central eminence is only suggested ; it is a realization for the future. It can not be foreseen that, when it is realized, it will diminish the proper greatness of other sections; or that the superiority of the United States, as a whole, will dry up any of the real sources of prosperity in other lands. A certain redistribution of industries will give to every region an eminence of its own determined by its natural resources and the special genius of its inhabitants, whereby its power to produce results will be greatly increased ; but the rank of nations and countries will be reassigned.

That nation or section which is possessed of the most extensive, and the largest number of, permanent resources, with the capacity in its people of making the most of them by their enterprise and intelligence, will necessarily come to the front and exert the widest influence. The ultimate leadership of the world was determined by the operation of those forces which, in geological times, distributed the resources of the earth in its bosom, and, later, arranged the relative positions, and directed the development and distribution, of the races of mankind. Character and special fitness will always have much to do with the course of human affairs and the rank of nations. The Germanic races will take the lead of the world for centuries, if not forever, and the practical sense of the Anglo-Saxon seems to assure to them always the front of this vanguard of progress and power.

It can not be foreseen that England will ever experience the fate of Assyria, Chaldea, Greece, Carthage, or Rome. Macauley's New Zealander is an impossibility. They all rested on superficial and temporary features of national character and on their relative situation. The prosperity of England rests on the inherent character and mental resources of her inhabitants and on a superior situation. This character and accompanying advantages are developed and strengthened, not worn and wasted, by her advance. When one resource of material power fails another will be easily found. Physical resources and particular advantages may be exhausted and changed; mental power is nourished by action. It does not seem that this vigorous intelligence can ever fail; that it can become the sport of circumstances or the victim of false systems. It is so strongly progressive and so wisely conservative as to become more and more the master of all situations, and no exhaustion of present resources can fail to be replaced by some other and greater. England, apparently, must always advance in greatness.

Yet, her own children, endowed with the leading features of her genius, found a better base for development, and, comparatively unfettered by the past, they had the same high instinct of prudence which has made her great. It led them to loosen the bonds that interfered with free action. The Anglo-American in the Valley has found a situation and outward resources which he is in the way of improving to the utmost, and which, in less than two centuries of independent life, will give him a decided and permanent advantage over his European relative. America has looser institutions, but the love of order and regard for law; a quick and intelligent perception of interest finds fewer obstacles than in the mother country; and her people have commenced a course of successful rivalry that will place the old country in the second rank at no distant day. Great as may be the progress of Old England, the New England, with its wonderful Valley, will outstrip her.

Capital tends toward it—not only because it can gather the largest rewards in the development of the superior mass and quality of resources, and of the greater ease and less expense of obtaining the raw material for its industries—but also because, from its central situation, it can more readily survey and reach with its products all the various markets for which they are destined. Capital will often cross the mountains and locate at Pittsburgh, Cincinnati, Chicago or St. Louis, according to the convenience and cheapness of material, if it seeks a market in every region of the country. Circumstances, indeed, modify that movement for the present; facilities are not equally developed in many of the newer sections, markets have not opened everywhere as they will in the course of years. When population has flowed everywhere and produced a demand for manufactures at every point, when competition is so close that small differences in cost of material and transportation, or presence in the general center of the country, secures larger sales at less cost, then what are trifles now will form the real margin of profit, and capital will prefer the Valley to the extreme East or West. This period will come in one, two, or a few, generations.

Business is generalized more readily when it is conducted from the center, unless local circumstances are so favorable as to over-balance that advantage. In a country of spaces so large and sources of prosperity so many and so great, the internal commerce will always remain vastly superior to the foreign, and a large part of it will start from central points. The middle regions of the Valley, therefore, will attract activity and, in the long run, will gather the greatest accumulations of industry and wealth. The business of the whole country will radiate from it and the tendency to outgrow and to control other sections must constantly increase.

What the country has become in a hundred years is very little to what it will become in another century. Its politics, its industries, its agents of activity, are developed to a stable point—are so unified that the pulsations of its thought and energy meet comparatively trifling obstacles and are felt from ocean to ocean and from Montana to Florida. With this free field activity will organize—that is to say, will regulate and harmonize its various branches so as to lose as little power in conflict as possible; which implies a center and a circumference, a head and extremities, a wise control and subordination. As the body of the people, the bulk of the natural wealth of the country, and conveniences for combining, assimilating and distributing the products of labor are found in the Valley it follows that other sections are united in it and controlled through it.

A large proportion of the commerce, the manufactures and the mining of the other sections are guided by the needs of the center and most important region of the nation. The country finds its unity and completeness in it.

It is no longer possible for one section of the United States to mistreat another. Interests are too closely interlaced, the importance of the welfare of one section to the others would consolidate the majority in all against any scheme of injustice. Although sectional misunderstandings and antagonisms produced a long strife ending in a fearful war, with its heated passions and bitterness, its reaction of demoralization, imperiousness and hatred, yet the contest did not have its root in the hearts, in the character of the people. It was precipitated by temporary and surface obstacles to an understanding which, during its course, were put in the way of extinction.

The passions it called out, the evils it produced, had not force of permanent antagonism to sustain them. The interests, the clear common sense, the natural unity of race, of principle and of country, forbade them a long existence. The sympathies of the inhabitants of the northern Valley flow out to the dweller in the Southern States as naturally and irresistibly as do the waters of the Great River. A sense of justice, the impossibility of long withholding natural rights from others, is absolute in the mind of the Anglo-American. Freer and more cosmopolitan in the Valley than elsewhere, the American citizen there banishes the prejudice or partial views that may offend other sections. He is deeply interested in unity of territory, of business and of feeling.

So the country is united in the Valley by all the cords of character, of sympathy, of policy, and of interest which bind a community into what we call a nation. With the close of the war, time only was wanted to produce the strongest national sentiment known to history. The free operation of the laws of association disposed of every evil existing before, or cultivated by, the war, and the powerful influences that brought the great work of reconciliation near to a conclusion in twelve years after its close with a celerity and irresistible force known only to American annals, were, in largest part, those springing from the Valley.

It has nearly eliminated the Southern question, the negro question, the States rights question, from politics. The Valley requires national union, a harmonious but a decentralized government—an indissoluble union, but one which cares for all interests, cultivates earnest common sympathies, and leaves each locality to attend solely to local affairs.

CHAPTER XVII.

THE NEW UNITY OF THE VALLEY.

The development of commerce on the Lakes and its movement through the Erie canal eastward emphasized the growing tendency of the country to divide on "Masons and Dixon's Line" into North and South. Industries, commerce and politics, social, civil and financial differences, tended to override and disregard some of the natural unities founded on geological and geographical bases. This tendency was resisted by the river system until the railroad system was developed, when the loosening of the bonds between the upper and lower basins of the Valley became the ruling feature. They were separated by temporary interests even more effectually than by political contests. The course of trade united all the free States and secured their success in the civil war It was a fortunate coincidence for the permanence of the Union.

With the close of the war all natural unities began to reassert themselves. The upper and lower parts of the Valley were sufficiently various in productions to prevent their being rivals in the markets of the East and of the world; they had mutual interests of exchange and of commerce that must grow larger with every year; they could assist each other's development effectually in many ways, and their greatest future welfare required that they should be as closely united by social, political and business ties as they were by unbroken slopes and levels, and by waterways.

The lake system and relations with the manufactures and commerce of the Northern Atlantic States were only two among the numerous connections of the great Valley. It was a question if the relations instituted by the Mexican Gulf would not soon become even more important than those with the North Atlantic.

This tendency to unity had been strong enough to produce the Louisiana purchase at the beginning of the century and it made the prosperity of the Valley in the early periods. The permanent relations began to regain their influence and a new unity was developed. The commerce of the rivers must still be comparatively unimportant for some decades; but the necessary preparations that were to bring out the full value of the river system and the gulf commerce commenced at once. In the early stage of their development the railroad and telegraph had been powerful agents of disunion; they now spread impartially over the whole surface and still more powerfully promoted the consolidation of every part of the Valley into a single business community whose great general interests were much more important than any sectional ones could be.

The first great movement was the extension of the railroad system to complete the settlement of the extreme West and Southwest, which soon became colossal. Settlement in Nebraska, Colorado and on the upper Missouri went on fast but was soon much inferior to that in Kansas, Texas and the Southwest, generally. Chicago became a market of importance to Texas, and its business with St. Louis was very large. The railroad and telegraph soon bound the northern and southern Valley more closely together than at any former period. They enlarged the field of Northern activity and opened to it various supplies and markets in the South and aided the South in its distress to recover from the destruction of its capital.

These movements were fairly underway when the financial crisis, that had long been hanging like a black cloud in the horizon, broke in storm and disaster over the country. The building of railroads beyond the paying point, the diversion of an immense capital from active business in their construction, the vast investments in manufactures and machinery, overthrew the equilibrium of business. The whole country suffered. As the civilized world had been doing the same thing the trouble was almost universal, and a prolonged period of depression, during which a readjustment of business and finance was to be made, commenced.

It was a period of great distress for it struck at the incomes of millions of men, paralyzed most manufactures and greatly reduced the activities of trade and the earnings of capital. But the railroads and the telegraph proved of signal value in modifying the effects of the disaster. The population thrown out of labor were redistributed on a large scale; their vast activities continued, though at a reduction of gain, and never, in the history of the country, had a larger space of virgin land been turned into fruitful fields. The East, Europe and the 25,000,000 to 30,000,000 of the Valley itself must be fed and the Valley farmers were still prosperous, if they gained less than before on equal amounts raised.

During this time the shrinking of values was great, and the losses of the extreme East and the extreme West, that is, the parts of the country outside of the Valley, were immense. They were to be counted by hundreds of millions; but it is doubtful if the Valley did not gain. Least of all to suffer were the South and Southwest. They had time to build up and create resources for the future; what they produced was salable and stagnation elsewhere favored the flow of both capital and labor to them. But most of all did the agricultural interest—the great specialty of the Valley—show its superiority in solidity—its power to resist shocks—over manufacturing and commercial pursuits. Incomes might be smaller but the most that was required for a comfortable living was raised by the individual farmer; expenses not essential to comfort might be diminished, and, as a vast surplus must necessarily be in demand to feed others, there must always be a moderate income beyond his own needs. It was usually easy to preserve the ordinary relation of income to outgo and the more economical habits gradually acquired were equivalent, in the section itself, to a large increase of income.

Thus, while the crisis greatly diminished the capital and the income of other sections, it probably virtually increased both in the Valley. It was equivalent to a transfer of both from other parts to the Valley, for there was actual loss elsewhere and actual gain here. Besides, the positive wealth was increased by the extensive opening of new sources of income, and by the transfer of capital and labor to this field, where it could be most profitably employed. Thus did the Valley "Come to the Front!" It had a stable base founded on the most pressing and permanent necessities of mankind. Probably the financial crisis was a means of enriching it by many hundreds of millions of dollars.

By the new development it had acquired much greater independence. It united in itself agriculture and manufactures, and the yet undeveloped capacities of its commerce could be looked after. If it was not already so it could become a real world and country in itself, in a broader sense than the East or the West; this capacity gave it the character of a vast and stable nucleus to the whole country. It had, by far, the largest part of the solid unchangeable values; the natural, as opposed to the conventional, wealth of the country. It was the vast rock under which the rest of the country took refuge from the fury of the storm; it had the realizable assets from which were to come the reconstruction of national and business finance after their demoralization. With its resources they could not possibly become bankrupt.

The great development of the Valley after the war, and the closer and more profitable relations of all its parts, gave a new unity to the whole country. Sectional issues disappeared, or tended strongly to vanish. The most favorable feature of its influence on the Republic and on modern liberal progress had always been its tendency to consolidate the country by interest—a centralization of much greater permanence and value than that resting in government. It ever tended to liberalize and disperse political power while increasing the adhesive tendencies of the Federal units in an equal degree. This was, and will continue to be, the true centralization of the country. It has no great interests unfriendly to those of the East or West. Their development, each in its own line, is its prosperity and its own resources enter a hundred fold more largely into the prosperity of those sections than any other whatever. They would each become comparatively insignificant without the Valley, and the Valley would be unable to dispose of but a small portion of its vast products without them. It consolidates and centralizes the country under the most liberal natural laws, which are never oppressive or tyrannical. It can not have an interest in depriving the other sections of any degree of freedom or any source of wealth; and the continual demand of its people and business is for the largest freedom consistent with equity. True centralization means the widest and most perfect harmony of interests.

The new unity of the Valley has fairly commenced under the universal spread of railroads and telegraphs, and the resulting generalization of interests; it has, however, only begun; its great results are in the future. The wealth now locked up in Texas, Arkansas, Louisiana, Mississippi, Alabama, and other States, is to become of great importance to the States of the northern basin. The exchanges are now great and profitable, but when they have increased a hundred fold—as they probably will have done by the close of the century—a much more complete reciprocity of interests will be established. It will be vastly increased by the commerce of the river and the Gulf coast with outside countries, for then the overflowing fruits of agriculture and manufactures in the center and the north will roll in a great flood down the Mississippi. The parts of the Valley will be welded together by community of interests and of friendly sympathies based on them.

CHAPTER XVIII.

THE PAST AND PRESENT OF AMERICAN HISTORY.

The people who laid the foundations of the American Republic, and in whose character lay its great destiny, came from a strong stock. It was chiefly by various branches of this race that the Roman Empire was dismembered, and under their rule modern civilization was gradually organized; their blood invigorated the degenerate Latin races, and their intelligence adopted many of the best features of the ancient civilization. Their rude energy nowhere had a better training or preserved more of its best force than in the British Isles in contest against the Celt or mingling their blood with his. Celtic vivacity and fire gave something of liveliness and animation to Teutonic strength, and the modern Englishman came forth the most stirring, sensible and progressive of races.

The modifications of this race in America proved to be in a very favorable direction. The conservative Englishman was recast in America by a variety of influences during which all his latent tendencies to radicalism were called into active play. What he inherited from Europe he tested by its usefulness under the new conditions ; he dug deeper and founded English liberties on natural rights; he reasserted himself, claimed all his rights as a man, and constructed new institutions, as far as circumstances permitted, on the most radical principles. The tenacity, vigor and moderation with which he held to this direction after it was undertaken offered something new in the history of nations and the result was remarkable.

It was not possible to carry theory into fact, in all directions at once; perhaps some of the theories bordered on the limits of the impossible ; but the idea was enunciated and practical wisdom set at work to embody it as far as might be. The result was worthy of admiration and reverence as a foundation and the children proved fairly worthy of the fathers. The two leading types of Anglo-Americans are found in the English yeoman and the English gentleman ; the early American types afterwards transferred to the Valley and controlling its development were the New Englander and the Virginian. They expanded very happily and in tolerable harmony in the Valley. Not even slavery could give them a fundamental divergence; the Southerner was a true and faithful republican, so far as his own race was concerned; and the Virginian who emigrated from Kentucky or Tennessee to the free States was not excelled by the descendant of the New Englander or the Pennsylvanian in devotion to American theories.

In leading traits of character the types completely mingled and fused in the free life and severe toil of the pioneer periods. Their thoughts, views and tendencies flowed together and in time became identical. In fact, all the early Presidents but one were of the Virginia type, and excellent samples of genuine Americans. Virginia and South Carolina were not excelled by Massachusetts and Connecticut in lofty patriotism. If one had the somewhat stern logic and morality of the English Puritan and the other the looser views and graceful dignity of the Cavalier they had equally English good sense in practical life, and when brought together in the new settlements all distinction was soon lost in the one American type. This combination was most excellent and fully carried on the original tendency of American development. The continental or interior American was flexible, freer from prejudices, wider in his sympathies and broader in his views; at the same time he was strong of will, active and ingenious in execution and of undaunted boldness. It was a combination to control and mould the millions of foreigners who hastened to the rich lands of the free West, and was entirely successful. No equally excellent union of amiable and vigorous qualities has ever before been observed.

This union of American types is not yet completely effected, for the labor system of the South isolated it and gave prominence there to the aristocratic tone of Virginia ; but the American was there ; slavery proved to be only an incident, a temporary disturbance, or arrest of one side of Southern character, and the removal of it left the underlying tendencies free to develop. Nor has slavery been altogether a misfortune. Many admirable traits grew up in Southern character. It became expansive, social, open-handed and generous. If the sweetness turned to vinegar, and open-hearted frankness to hatred and defiance toward the North, it was largely the result of the situation; of an antagonism of interests and relations that made many of the excellencies of each defects to the other. The disagreements, enmities and destructive contests of nations, classes and individuals, which fill the pages of history and spread misery through the world, are mostly the result of such unfortunate situations, such unnatural antagonisms.

Yet, nowhere has so large a population passed through a century with so little of fatal collision, and for the simple reason that there has been intimate intercourse, healthy, stirring life and a fair acquaintance with each other. But the antagonism of the two labor systems was absolute and uncontrollable. Compromises were only possible while there was a balance of power between them. They could not exist together; they must draw a conventional line and arrest the operation of natural laws; it was not possible to arrange a basis of mutual interest. When this element of necessary disunion is thrown out and all Americans can circulate among each other, when the laws of common interest can operate freely, they find that there is no real diversity of type. The sections discover that they have the qualities, the natural harmonies of interest, of one family. The interest of one is really the interest of all, and each had the admirable qualities of the common ancestors. Many Southerners felt after the war that they could endure relations with foreigners better than with Americans in contest with whom they had failed, and emigrated to other countries; but they found they had more things in common and more chances of success with American opponents than with foreign friends.

So the past and present of American history shows, from whatever point viewed, that Americans have been run in a common mould; that the influences guiding the growth of character and of ideas have identified them, brought them together, even when they seemed very different from each other, and far apart. Americans of all sections are most truly and distinctly parts of one nation. They have the real sympathies, ideas, capacities and common interests that go to constitute one community, one people and one race. From the Atlantic to the Pacific, from British America to the Gulf, this has proved to be the case in every period. The Valley and the East have not grown apart, but together; they are and have been essentially one people. Americans on the Pacific are only locally and slightly different from other Americans, and every indication goes to show that, as soon as memories of contest and bloodshed and great losses can fade and grow dim under the influence of time and a new prosperity, the South and the North will be equally harmonious. Unity and homogeneousness have been the great dominating features of American growth.

The American idea was that of a political equality which should give to each man weight and influence in the control of public measures that affected himself. All Englishmen had recognized personal rights, but they were restricted by the aristocratic organization of society and the confinement of political power to the more fortunate classes. The absolute form in which the rights of man were claimed in the Declaration of Independence gave great definiteness to the popular conception of liberty among a people freeing themselves from foreign control and establishing new institutions. They were too prudent and practical to go to the same extreme as the French people in their revolution; but they did not lose sight of the idea; they carried it out as far as it seemed practicable without injuring established order at the time. Universal, or manhood, suffrage was limited still to some extent by property conditions; but the idea was fixed and made way as to the white population. There was very little restriction in the West.

Popular discretion and judgment were distrusted at first, and checks to it were devised; but these became a dead letter, or were removed, in the course of time, and the people were more and more regarded as masters whose will was to be constantly consulted and respected. The dangers of ignorance through the influence of unprincipled men have always troubled American statesmen and patriots, but they have never been able to restrict suffrage; and so general did the idea of manhood rights become that the ruling majority at the close of the Civil War conferred the right to vote on all the freedmen who had just escaped from the utter ignorance of slavery. It seemed to many ruinous, as the liberal naturalization laws and gift of suffrage to the ignorant had seemed to others in earlier periods.

This constant extension of suffrage rights had its inconveniences and dangers. Corruption and abuses were frequently the result in the cities and the mass of the colored people admitted to the ballot box depended on others for guidance. Their entire want of definite ideas and experience rendered them incapable of independent intelligent action. How is it that the American Ship of State has not foundered on this rock? It has been often thought there was imminent danger, yet the catastrophe has never befallen. The Southern States, re-admitted to the Union with so may ignorant voters and restored to the hands of the Southern whites who maintained the war for the Confederacy, disapproved that extension of the franchise on every ground; yet it was maintained without fatal results, and seems likely to be quite as harmless, in the long run, as the naturalization of foreigners in earlier times.

It would certainly have been a dangerous experiment anywhere else; the fortunate result is due to the superiority of natural over conventional law. Social and political organizations have an overplus of vital and conservative forces, as vegetables and animals have. They can overcome difficulties and correct errors, expel obstructions or conform to new conditions as a human body can expel disease or become acclimated. A law of equilibrium is observed in all nature and it is only necessary that it be allowed to act freely to maintain all things in place. American institutions and habits have been more perfectly conformed to natural law than any other, and the self-regulating principle has been allowed its widest possible range. It has saved the country in every peril. This freedom of action was almost unlimited in the North, while it was set aside in all things that related to slavery in the South. The result was a growth incomparably greater and stronger in the North, and a trial of that comparative strength must inevitably be against the South, while a free development would have left the sections fairly equal.

The American system has a healthy vigor and fullness of vitality equal to every possible difficulty. The general judgments of the American mind reveal a clearness and accuracy of estimate that renders fatal catastrophes quite impossible. There being little restraint on party or individual action they can accommodate themselves to all circumstances and crises. There is a much clearer comprehension of political issues than the amount of general education would measure, for Americans are educated the most fully on political topics, and possess a vast amount of political sagacity and tact. They have the excellent gift of allowing things to take their course when no matter of immediate personal interest or public peril is involved, and quietly pursue personal ends; but when a serious danger threatens they spring into action. They have also something of the shrewdness and impassiveness of the English, of their disinclination to disturb the existing order, to make the best of a situation lest hasty action should make a worse. Discontent commonly contents itself with discussion, grumbling, prophesying evil, acting with the party and really making the best of things as they are. So Americans really do very few important things in haste.

The ignorant and degraded, on obtaining the right of suffrage, are raised in their own esteem and are treated with consideration by parties and politicians. Gradually they learn to think and judge correctly in politics even if ignorant as to other things. There is always less ignorance on critical subjects than appears on the surface, and a man treated as such soon feels and acts as such ; learns to discriminate within reasonable bounds and to be amenable to reason in general. Thus the country that recognizes a *man, as such,* finds that she has a vast sum of manliness when that quality is pressingly needed. There is no possible danger from which the quality she has so carefully cultivated will not save her.

Not that there has appeared a miracle of purity, dignity and nobility in the details of American history. Men have been still more or less vicious; more or less forgetful of high aims in pursuing individual ends. Every generation has feared and cried out against its own evils, which have been neither few nor small. Improvement has been as imperceptible as natural growth always is, and it has been the less noticeable that it has been general. Great crises that awaken enthusiasm produce a glow and brightness among its nobler men which renders them distinguished, and early American history was remarkable for many men distinguished for high-mindedness. Later times, for the most part, have less raised individuals to special renown than elevated the tone of the whole people so that they appreciated the noble work done by the founders of the Republic, and, amidst all the selfish interests and rivalries of ordinary life, sustained it and carried it forward toward completion. That is the greatest possible praise, especially when there was unusual freedom to pursue selfish interests.

The general system reacts favorably on men; the adjustment leaves every man to live out his own life; the responsibility for maintaining order and justice has been thrown on the general public and has required men to think and act for the general welfare. All these have appealed to the good sense and better nature of common citizens sufficiently to lead them to act in a higher strain than any people have ever done before. On the whole, there has been a large average of true progress with every generation since the settlements of the English colonies in America commenced.

CHAPTER XIX.

THE GRAND EXPERIMENT AND EUROPEAN DEMOCRACY.

American democracy was transplanted from Europe. It had its remote root in the nature of races which refused to accept civilization, as did the old Asiatic and many later races, at the hands of an absolute despotism. They maintained many liberties as progress among them went on. Yet, the royal, the noble, the rich and the educated classes gathered the most of the public power into their hands during Feudal times and for centuries later, even where the independent spirit was strongest in the people. As learning spread and became more thorough and true, and as the increasing range of activity and gain demanded more freedom of action, both theory and interest revived the original self-assertion of the primitive man. A movement against privileged classes, among those of the people who felt themselves mentally their equals or superiors, was quickened by the arrogance with which those classes asserted their conventional superiority and their actual power, and this formed the beginning of an intelligent democracy in most of the nations of Europe.

Yet, society was so firmly constructed on class rule that a real and true democracy could not hope to succeed. The larger masses of the people were too humble, too ignorant, too powerless and too much intimidated by the splendors of power and rank to rise against them except in the blind fury of passion at some extreme injustice to sink back into their ordinary submission when a temporary vengeance had been taken or attempted. Many Europeans who settled in the English colonies were of the few who disputed the principle of class rule and who sought relief from a galling oppression. They were intelligent, energetic and sufficiently numerous and influential to lay new foundations in the wild solitudes of the New World.

Yet, the theory that only the higher of classes a nation were capable of governing it, continued to maintain its place almost universally in Europe, and much pride of caste found its way across the sea. European notions of respectability and rank were fostered by the form of colonial governments and their connection with the mother country, and held no small place in the public mind down to the times of the Revolution.

To establish so complete a democracy was to undertake an experiment; it was to bring the radical theories of scholars and the aspirations of the lower classes to a final test. At that time, indeed, few scholars dared to go so far even in theory; and the people, as masses, had scarcely conceived such a complete change as possible. But the higher tone, great independence and intelligence of the common people in the colonies would not have permitted organization on a strictly European model. The whole tendency of life in the New World was to bring the different classes nearer to a common level; but still it was with many misgivings, and because no other plan could be agreed upon, that *all* class distinctions were swept away from the political field as to the white, or European race, but property conditions still limited the number of voters, and various checks to injudicious and hasty popular action were devised.

The separation of the settlements into colonies independent of each other, favored popular liberty and a democratic organization of the General Government. These, as States, unwillingly accepted a superior; allowed it control over none but the most general interests, to reserve the field, as much as possible, to State control. In the States the *people* were strong without being violent, but asserted themselves with emphasis. All things were favorable to the experiment of a government founded on the political equality of its citizens, and it went into operation on a basis sufficiently broad to make it a real test of the capacity of the masses of the people for self-government.

The success of the experiment would naturally be declared by persistence in maintaining the system and by general prosperity under it. A hundred years after independence was declared, and ninety years after the system was formally organized in detail by the Constitution, found the system more firmly seated than ever and the prosperity through the century, as a whole, entirely unexampled in the history of nations, both for breadth and volume. The old theory was, that the people were, and could only be, minors, who must be kept under the guardianship and government of the intelligent classes—that is those who, by birth, advantages and success in life, were assumed to be alone capable of seeing what was best for them.

The new theory declared that all men had an equal right to decide what was best for themselves, to select the depositaries and agents of public power, to manage all common interests among themselves and to demand that no artificial barriers should shut them out from the contest for the prizes of life.

The success of the Republic has been accepted by the world as a decisive condemnation of the old theory of government. America is stronger by all the practice in statesmanship of its masses, by all the intelligence and self-respect this practice has developed, by the wider and more equable distribution of its wealth, and by all the business energies and skill it has given freer play and a larger field. This success is not only the pride and happiness of the American people; it has solved the problem of the world. It has not only shown that the *people* can take better care of their own interests than self-appointed guardians, but also *how* they can become strong, intelligent and persistent enough to maintain personal and national rights. They have grown up in the sight of the world from three millions of poor agriculturists, struggling for a firm foothold on the borders of the continent, to near fifty millions, with almost a thousand millions of property to each million of inhabitants, their republic seated securely in the heart of the continent, ruling from ocean to ocean, and just prepared to enter on the full development of its colossal resources, only at the threshold of a great and brilliant career of the truest and most solid progress.

Europe is also progressive, for democracy did not lose all its advocates, notwithstanding multitudes of them came to settle America. Through the nineteenth century, especially, it has drifted fast toward liberal forms of government. Its progress was necessarily slow, for it had the organizations and theories that had been accumulating for eighteen centuries to modify. This work of preparation was the main feature until 1860, but the following fifteen years indicated that it had commenced the work of a massive reconstruction. The modification of institutions and modes of government began to take large proportions and the re-distribution of power was very general throughout Europe.

The more striking events which indicated the direction and strength of the tendencies that were everywhere liberalizing governments and transferring power from the privileged classes to the people at large—or to ever larger masses outside those orders—were the emancipation of the serfs in Russia, the establishment of a Republic in France, and the development of constitutional monarchies into distinct and pronounced parliamentary governments. The village communities of the Russian peasants had always preserved some of the forms and memories of a democratic government among the lower orders of the people. They had not been permitted very much real and vital action, except in the economy of the labor system, until property in serfs was abolished by this act of emancipation. That gave them a chance to become a living democratic organization, and made it possible for a large amount of freedom to be dispersed among the masses of the people. It was the date of a new era for a great nation, although the changes sure to grow out of it must occupy some generations.

The establishment of the French Republic, ten years later, was accomplished with the suddenness and completeness characteristic of that nation. It occurred at the moment of great military disasters, and while the country was being invaded by a foreign army; but the Republic distinguished its first years of power by three acts of great wisdom and prudence, which apparently settled it on a firmer basis than any European Republic has ever known in the past. It suppressed the extreme radicals, or communists, and established a conservative Republic with a parliamentary government; it displayed great ability in reconstructing the finances and restoring the material prosperity of the country after the immense losses of defeat and invasion, and a great indemnity to the conqueror; and it preserved great moderation in the contest with monarchical parties which sought to overthrow it. All these showed self-control on the part of the people, and a strength that promised order and security to industry. It was a signal evidence of democratic progress in Europe.

Popular uprisings against despotism just previous to 1850, and the concessions made to quiet them by monarchical governments in the ten years following, had secured Constitutions regulating the exercise of power in all the countries of Southern and Central Europe. These concessions were followed by the loss of personal control over the legislative and executive branches of government by the hereditary ruler and the substitution of a ministry, or cabinet of officials, whose measures and policy must be in accord with the majority of the legislature elected by the voting classes. These classes now included all, at least, of the *prosperous* in the community. This is called a "parliamentary" government. As those allowed to vote included a large proportion of the people, and their delegates could legally control and determine the policy of the government—a modified democracy was definitely established. It was long before this system came into good working order, and although the influence of the higher classes, when that was done, was still extremely great in many ways, it was, notwithstanding, a great advance toward popular government. England has had a parliamentary government for nearly three hundred years, although the basis of representation in the parliament was very limited until 1832, and the aristocratic classes are still largely represented in it—an American would say unduly. Yet, they have usually been very patriotic and liberal. Since 1867 the elective franchise has been extended, the better part of the laboring classes being now represented as well as the more prosperous "middle" classes.

In this fifteen years public opinion has become the virtual ruler of Europe. This public opinion leaves out, as a direct influence, many of those who, in America, have as much weight by their votes as the richest gentleman or most prosperous merchant, manufacturer or farmer; but they make themselves felt, through combinations and associations, as a growing power, and are listened to from fear, if from no higher motive. To bring about this promising state of things the example and prosperity of England has had great weight; the spread of wealth and prosperity to larger and larger numbers has contributed much to it; and a better understanding of the principles of political science generally has helped greatly. An important influence in liberalizing government policy in Europe has been the fear of revolutions, of which there were so many in the first half of the century; and the necessity of courting the favor of the people to induce them to support the large armies which every European government feels it necessary to maintain has helped the liberties of the people in some ways while hindering them in others. These are all forces purely European, and many others less prominent have contributed to strengthen the movement toward democratic liberty; but one of the strongest influences to quicken all these into vigorous and rapid action has been the success of the grand experiment in America.

European thought, culture and character furnished the theories and the men to develop them, and sent them to the toil and unrestricted activities of the New World. There the theories were worked out with a fullness and thoroughness impossible in an old society. Europe looked on half doubting and amazed, but much moved. The first great reaction was on the French, who, on the definite establishment of the American Republic, raised the cry "Liberty, Fraternity, Equality," swept aside all established order and reduced all its people to the level of citizens by acts of the most terrible and bloody violence. It was republicanism gone mad, and turned mankind sick with horror. All Europe rose against it. It was incapable of the wise moderation required to form a strong and stable organization, and failed, leaving a stigma of shame and guilt, and a memory of fear and dread to the name of popular liberty. Yet the people had learned that they were strong and the Western Republic remained unshaken and prosperous. The experiment was disastrous in the one case but the demonstration in the other was favorable. It inspired the courage of peoples and proved the theories of enthusiasts.

Many revolutions in the course of fifty years were failures; personal and aristocratic governments believed the only security against the overthrow of society and the destruction of civilization was in suppressing them with severity. Remnants of republicanism were preserved in France by the Empire and transmitted to the future, and, notwithstanding repression, the spirit of democracy spread widely in Europe, cheered and sustained by the rising success of American institutions. The effect was very marked on England and led at once to a more liberal policy with her colonies. Her own people had fairly comprehended the significance of American independence and its success, and demanded great reforms. Between 1820 and 1840 they had been introduced on an important scale at home and in many of the colonies, which soon acquired liberties substantially as great for their needs as in the United States, the more general level of conditions in a new country rendering the institution of parliamentary governments in them more democratic in their practical workings than in the mother country.

The striking success of a completely democratic government in the great Republic, the prosperity of the English colonies, and the good effect of enlarging the base of freedom in England itself, kept the tendencies toward democracy in Europe constant and strong, notwithstanding the fears and resistance of the ruling classes. Millions of the European peasantry flocked to the land of liberty and equality and gave larger space to those they left behind, which materially improved the condition of all. They became generally prosperous and respectable freemen and citizens, which reacted on the character and consideration of the classes they had sprung from across the ocean.

In a thousand ways the influence of America helped to quicken the regeneration of Europe. When the Civil War closed, with an undivided country freed from an anomaly and a breeder of mischief, with far better prospects than ever by such a demonstration of unsuspected strength in democratic institutions, the reaction on Europe was profound. It helped to plead the cause of the people with the intelligent and rendered the masses of the people confident and decided in demanding larger liberties, and the ultimate supremacy of democracy in all civilized lands was settled. Governments and ruling classes yielded more and more, and progress became constant. America has been the school of the nations.

In society, as in the organic and chemical world, everything is in a state of unstable equilibrium—that is to say, the dominion of change is universal. No relations are absolutely permanent. However slow, change is going on ceaselessly, and this mutability is controlled by law as certainly and absolutely as the circulation of the blood or the flow of a river. The order of the universe, with all its processes, activities and ultimate ends, is placed under the supervision of this law. Numerous intermediate stages lead to provisional ends, and the temporary relations and tendencies often seem to conflict with each other and to oppose themselves to the general sweep and grand aim of the system of forces; but this appearance arises, always, from an imperfect comprehension of relations, forces and their ends. The Intelligence that guides them all never works blindly or unavailingly.

European and American history have been the expression of a single phase of progress, or system of social and political development, which is to broaden and deepen until it embraces the destinies and promotes the welfare of the entire human race. Under the law of change, or development, each institution, each social, political, or intellectual force in Europe and America has played its useful part in the progress of the whole system toward its final end—the highest and truest civilization. This high end can only be reached when all the powers of the individual and of the whole body of men are developed to their fullest and best action. This implies the amplest liberty for each and all; and therefore the freest institutions declare the nearest approach toward the grand aim.

But all the parts of a system are intimately bound together; they change in harmony, and movement in one part assists movement in the others. So America and Europe interlock. The democratic ideas and inhabitants of America were of European origin. They were transferred to America to develop in freedom and at ease. Europe had still the same ideas and tendencies, and every sign of progress here had a corresponding influence there. Liberty on the two continents has developed in unison. A conservative, orderly, yet progressive, democracy had few hindrances here;

it had many there; but the force of progress here had the effect of a motive power there. Thus, by the law of change, which embraces all relations and impulses, movement corresponded on each side of the Atlantic. America and Europe are one.

By these relationships and this mutual influence, all the mature experiences and thought of Europe benefit America, and every phase of politics and prosperity in America benefits Europe. The great resources of the Valley, the free character, the intelligence, the enterprise, the noble institutions it nourishes, benefit Europe and humanity as well as its own possessors and the Republic at large.

CHAPTER XX.

A HISTORY OF THE PROPHETS OF EVIL.

In looking over the resources of the regions included in the Mississippi Valley they have been found deep and abundant; studying the progress, from decade to decade, in making them available for the use of man a rapid enlargement has been noticed, and that enlargement has never been so wonderful and massive as in the last ten years; the growth of population has been something marvelous; the poverty, roughness and looseness of frontier life have been seen to disappear with the increase of numbers and the means of transportation that made resources available for all the purposes of a complete and costly civilization. With wealth came refinement; temporary political and other institutions gave place to permanent ones admirably adjusted to the requirements of an intelligent, moral and essentially upright people. General progress seems to have been nearly uniform through every development of life in the great Valley as in other parts of the country.

But this is following rapidly down the stream of events and observing results rather than processes. All this has not been gained without toil and sacrifices, without storms and black clouds, often threatening disaster. Human nature is the same in the Mississippi Valley as elsewhere; it has not always turned its best side to the observer, nor always been in its best mood. Freedom often seemed to encourage license, and those who were prone to dwell on the dark side of life have found much to beget gloom and dismal forebodings. Every generation has had its share of the trials of life and its Prophets of Evil. We can smile at their prophecies now and see how false they were; but there were real and threatening evils in the view of those who did not comprehend the healthy constructive vigor that dwelt in a new society filled with the sap of a young life. Freedom lets loose the evil as well as the good, and the young communities suffered the evils as well as reaped the fruits of liberty. A country in its youth " sows its wild oats " like any other youth, and " learns wisdom by the things it suffers." The mistake of the prophets was that they took the real evils for permanent characteristics, instead of passing phases, of the process of development.

The more dreadful forebodings as to the outcome of these institutions were felt in the first years of the century, while the experiment was yet immature. The bitterness of parties was never so great. The French Revolution had experienced an epoch of " white terror " and horrible excesses; then France had passed into the hands of an absolute master. Jefferson and his party were understood to sympathize with French ideas, and the opposite party saw every reason to fear and dread their reign ; while the democratic party feared the establishment of a despotism by the Federalists, who thought a strong central government necessary. Many expected the Constitution to perish under popular excesses or by the stern hand of despotism. We know Americans better by this time, but there seemed real danger of unhappy precedents being established in the days of inexperience.

The pioneers of the West had been mostly uncultured men of the backwoods; they lived a rude life and had a pitiless foe to fight away from their cabins and families. There was danger that they would become barbarous, revengeful and bloodthirsty; that, having received little aid from the States while struggling against and conquering their great difficulties, they would yield to the temptations which so many evil ambitions were spreading before them, and join the French, or the English, or the Spanish, or follow the promptings of Aaron Burr and others, and undertake a dangerous and stormy independence. There were men in abundance on the borders who were upposed capable of any infamy and willing to serve any chief for booty and a lawless life. Yet, how few were really ready to listen let the utter failure of Burr's schemes declare.

From this time (1807) to 1830, Western and Southwestern life was much studied and prophesied about. The life was rude and wanting, for the time, in many of the essentials of a high civilization. The young grew up in ignorance; overflowing with boisterous vigor they seemed to promise an after-life of excesses dangerous to social order and fatal to well-regulated liberty. The institutions of the Valley would fall into their hands, the responsibility of maintaining them in strength and purity seemed too great for them. It was thought a rock over which the Republic was sure to stumble to her downfall; yet, what generation has more honorably or faithfully done its work than that which ruled from 1830 to 1850?

There were dangers in other directions. If their uncultured instincts were true to liberty and the principles of the fathers, they had the details of statesmanship to conduct. The legislative halls were filled with bold but unlearned young lawyers, farmers and men who had no experience in finance and political economy. How could they manage these grave subjects without fatal injury to public and private interests? Indeed, many sad mistakes actually occurred; the wildest theories of banking and general finance sometimes carried them away, and the West was flooded with worthless money. Many private fortunes were ingulfed, distress was general, and serious burdens were entailed on the public for many years. What but ruin could come of ignorant rashness raised to such dangerous eminence? Yet general progress pursued her tranquil way, the errors were corrected by the ignorant generation that had itself made them and all trace of their ill effects soon disappeared.

The great freedom allowed to individual enterprise and aspiration might give full play to passion, to intrigue and corruption where an unlearned and ignorant people were the ultimate sovereigns—the depositaries of power. What dangers were not to be feared from the intrigues, the misrepresentations of dishonest demagogues? It was sadly feared that all that was just and truthful would disappear in a wholesale scramble after power and place; that the habit of dishonesty and self-seeking would be the ruin of public affairs. No more eager, wily, successful wire-pullers and underhanded diplomatists have been known in any public life than have been sometimes found among this shrewd, ingenious race. What better opportunities did crafty men ever enjoy of "engineering" themselves into a fortune than were offered by the confusion and sudden wholesale spread of settlement over the West from 1820 to 1850? How many became immensely wealthy by planning and managing, by false representations and underhand dealing? There seemed the most imminent danger that the want of strict supervision, of a pure and high-toned public sentiment, would allow the virus of dishonesty to spread through society and afflict it with a fatal disease.

How should a generation brought up in ignorance appreciate the value of education, and, where population increased with such rapidity, how could they be expected to make the provision for the intelligence of the future that would save a society rapidly increasing in power from going to ruin? These and a thousand other dangers seemed to portend certain destruction to morality, justice and order in the near future. There have not been wanting multitudes of prophets to point out all these dangers. To them the failure of democratic liberty was proved. They could see few redeeming features in the situation; only a rapid degeneracy of an originally staunch and upright race. It has usually been the party out of power who have pointed out all these ruinous tendencies. They could clearly see what was amiss for they could reap no benefits from wrong doing, and many from getting it believed that their opponents were the authors of the evil. With the heat and earnestness characteristic of Americans they often pushed their argument to extremes and increased an evil they were supposed to be laboring to cure.

Slavery was a contradiction to the peculiar American idea, a cause of weakness in numerous ways, and a constant menace to the stability of the Union. Yet, slavery has long been dead; the disappearance of about a fourth part of the great public debt produced by the Civil War and the existence of a better currency than was ever had in earlier times have proved that the people are not wanting in financial skill or honesty. The generally accurate and successful working of the vast and complicated machinery required for the conduct of the public business of a most active and wealthy nation of nearly fifty million souls indicates that dishonesty has not triumphed. The evils were transient, at least in their virulent form; they were quite inevitable; and it would have been of all things the most undesirable that the natural freedom, from which they were inseparable in a new country, should have been disturbed by forces from without really strong enough to suppress them. The special value of American democracy, of the free and popular form of its republican institutions, was in the unrestrained growth of *all* the people under the discipline of an independent life. To learn by experience is to learn thoroughly; defeats as well as triumphs teach. The experience of a life which must rule itself, correct its own errors and repair its defeats from its own resources, is the best possible education. It develops the *character* from its roots to its topmost bough; it brings out all the manliness and genuine worth that is in the people.

The evils that have been prophesied about as certain signs of approaching ruin by grave historians and intelligent travelers from Europe, that have produced foreboding hopelessness in a small minority of thoughtful, but not very penetrating, American patriots, and that have always formed the staple of party oratory and invective, have gradually but surely disappeared in the process of growth and under the teaching, often severe, of experience. Having to hear both sides of a question the people were the judges and, with many mistakes, learned how to judge correctly in the end. The self-seeking and dishonest came to be less and less selected for high positions, for the people were free to set them aside as soon as they were fairly convicted of sin. Wire-pulling diplomacy has learned to consult public opinion and be guided by it. It no longer hopes to control and *make* public opinion. Parties offset each other and neutralize each other's heat and exaggeration; business interests learn not to endanger success by over-selfishness, but to seek it in a general harmony with recognized principles; truth and justice are found to pay best in the long run, in every walk of life. American life meets with no evils that are irremediable, because there is no invincible power behind which wrong can shelter itself.

Public policy and public men pass periodically before the tribunal of the people for approval or condemnation; this produces profound respect for them by public servants, and respect for themselves among the people. Among all possible modes of elevating a great community this is incomparably the most effective; therefore, the early faults of ignorance, of boastfulness, of hastening into action before maturity of consideration has been given to a subject, have become more and more rare. The people are found capable of a slow, considerate, but final, judgment from which nothing can move it; of a fixed and permanent resolution which they were supposed never to show till revealed in a century's history of the Republic. They used to be judged by republics of the past in which fickleness and various growing vices were the rule. But no republic that ever existed, of any size, had any real claim to the name beside that of the United States. In them the few were always the masters of the many; the base of public power was narrow and the masses were oppressed as in governments with a less honorable or popular name. Only in America did power really descend to the lowest strata of society and a *real* political equality become universal.

Therefore, the prophecies of the prophets proved false; there was no real parallel in the cases on which their reasoning was based; and they left out of view the regenerating forces that lay beneath the surface. Public opinion is found to be, in the long run, as much more reliable than class or private opinion as its base is wider; and all wise men have learned from American history to respect it accordingly.

Europe has learned the same lesson from its own improved experiences and none of its governments are so strong as those where the base of the political fabric is broadest; where all classes may speak, are listened to, and their judgment accepted as parts of public opinion. A government founded on the manhood of all its people has the utmost strength of which a government is susceptible, embraces all the recuperative and progressive energies which lie in the possibilities of man himself. Such a government is indestructible because man has inexhaustible capacities of growth. There is no limit to his possible attainments, with time and opportunity to grow freely. Therefore, *all* prophets of ruin are *false* prophets. Uncounted and great evils have existed and still exist; but they are essentially limitations, vices of the time, vices of ignorance, of shortsightedness and mistake which, in a society free to expand and to learn, must necessarily fall away and disappear.

These false prophets usually urge a system of immediate action and strenuous effort by a limited class whose energies, rightly directed and with a given force and persistence, are to save society. It is, however, a false doctrine, for if society does not possess the power of saving itself, if the regenerating influence does not exist in itself, no outside power can save it. Its own vitality is the only force equal to the work. Nor can its forces be persuaded to act out of season. They decline to be hurried or controlled. In due time any designated point of power and excellence can be reached, and will be reached, by the simple and natural process of development from within. The people so filled with alarm and distress vex themselves and others in vain, for when the right point of growth has come the desired reformation occurs spontaneously. They may seriously disturb that process and defer it, if they are successful in gaining converts to their views, but they can only help it by a quiet attention to their own uprightness and conforming their own lives to the highest truth they see.

Many countries in Europe secure an enforced regularity and appearance of excellence that is not found, as yet, in the United States. A degree of apparent confusion and real disorder may exist, in various forms, that compare unfavorably with the exactness obtained under a strong centralized government; but the evil which exists because its time for being thrown off by growth has not come is preferable, in general, to its suppression by an arbitrary force that does not spring naturally from the society affected.

CHAPTER XXI.

THE AMERICA OF THE FUTURE.

In its most essential features American history has been a record of successes. Its struggle has been constantly embarrassed by a rapid growth that added new elements to be moulded and harmonized before the old elements had been fully mastered; but with the heavier task came increasing strength. American progress has been through difficulties; but difficulties well borne are lessons well learned; and the country has never been so patient, so wise, so strong and united as at the close of its first hundred years of successful combat with obstacles. Its future is full of promise.

The only afflictions the Western Continent had suffered that were almost purely evil, and that in a high degree, had risen from the efforts of European governments to establish their own arbitrary, restrictive and selfish systems of state and class policy in their colonies. Under those systems, wherever established, the virgin wealth that could be immediately realized was wasted, and the fountains of prosperity flowed but languidly or were dried up altogether; the natives suffered immense and cruel injustice, revolting to humanity; and the European settlers under such forms of government lost the progressive tendencies which their several nationalities still showed at home and became degenerate. During the first quarter of the nineteenth century, however, most of these European colonies, inspired by the example of the United States, declared their independence and asked its recognition as self-governing republics. Soon after the Constitution of the United States had gone into successful operation the republican government was solicited to interfere in favor of freedom in Europe. This it refused to do, and established the precedent of non-interference, as a government, with the quarrels and contests of others. It would be at peace with all the world so long as its interests and dignity were not attacked. On the other hand, it offered a refuge to all who chose to come to it, and citizenship on the most reasonable terms.

Its war with England, closing in 1815, had been chiefly caused by its determination to protect these adopted citizens when claimed by the governments to which they formerly owed allegiance, and it now determined that, while it adhered to its policy of non-intervention with the internal affairs of Europe, the various governments on that side the Atlantic should not extend their possessions in America. The Spanish-American republics were recognized and America was henceforth devoted to freedom.

This principle of American policy was distinctly set forth by President Monroe, in 1822, and received the popular name of "the Monroe Doctrine." The United States Congress virtually ratified it by the act of recognizing the South American republics as, by right, free from European control.

This was the only overt act of defiance of the absolutism and ambition of foreign nations; to a certain extent it placed itself as a defender in front of the new republics and reserved the New World to Americans, or, at least, to such institutions as actual residents in it should determine to establish. It was a proud position to take, for it proclaimed itself the leader and champion of a third part of the earth. The fruit of the Monroe Doctrine, supported as it was by the development and growth in power of the Great Republic, was to encourage the freedom of American nations, to quicken the spread of its own principles from the Polar Sea to Cape Horn, and to maintain the tendency of all the dawning nationalities toward democracy. The abolition of slavery and the rapid movement given to industrial activities by its vast railroad system made it the center of influences much more powerful in acquiring real eminence as a leader in the two Americas than any possible conquests by war or skill in diplomacy.

Its influence on England was probably considerable, leading her to treat her remaining American colonies with wise liberality, and they soon obtained all the real liberties possessed in the United States. The difficulty of constructing, and especially of maintaining, true republics in the Spanish American States was nearly as great as it could be. They had not the original base of character on which the discipline of poverty and labor reacted so happily in the thirteen English colonies and in the Valley of the Mississippi; they had no previous gradual training in self-government; the rule must long be that of a comparatively small class of whites of European descent. But for the success and example of the United States they would probably have failed. It did not interfere with them directly, but it had itself a success so shining that it encouraged them and the Monroe Doctrine was a virtual protection against European intrigues and attacks. Under the shadow of the Great Republic their democratic institutions maintained themselves, notwithstanding the efforts of innumerable private ambitions breaking out in revolutionary attempts. A true conception of republican liberty gradually spread among the people and ever larger numbers became enlightened and capable of working wisely for the common good. Thus the Monroe Doctrine was fruitful of good in the two Americas.

From this historical growth of republicanism, and from the impulse toward prosperity given by the wide-reaching influence of its industries and great development, the country seated in the Mississippi Valley, to a certain degree, unified the growth and interests of both North and South America. This was in a remote and preliminary way until the lower Valley was relieved of its embarrassing labor system. This feature was strengthened materially, after that event, by increasing moral influence, by greater industrial influence, and by multiplied commercial relations; but its full significance is to be developed in the future. Harmony of institutions, variety of products and boundless natural resources in almost every part of both North and South America will make their future relations extremely valuable. The capital and enterprise of the prosperous Republic of the North will send the pulses of her own energy, in constantly more powerful waves, through the whole length of her own continent. The same thrift and wisely ordered activity will be constantly encouraged. The Gulf of Mexico will begin, by and by, to assume its proper position as the highway of the most active commerce. and lead to the closest relations of interest.

But the Valley is much more the uniting bond and the ruling center of North America. While the work of general settlement within it and the United States at large continues, and until development has tolerably filled all the channels of trade, the relations of the two branches of the Anglo-Saxon race in North America may be comparatively few. The rich soil and many advantages of the Valley and of the mines and valleys of the Pacific Slope and Rocky Mountains now draw a large proportion of settlers because the immediate future is better assured by the growing wealth and activity about them; but later all the available parts of British America will be filled. The extension of the Valley in a continental trough northward and the common interests that must multiply on each side of the lakes will unite the two peoples in a very close industrial union. It will not be essential that they should merge together in a political union. They will each be enlightened enough to harmonize their common interests and permit natural relations a suitable play on the basis of mutual political independence if that should be the preference of the people of either.

British Columbia and the States of the Pacific coast will sustain similar close relations. The most of Mexico is a continuation of the high broken plateau which is so wide and rich in the United States, and is, in Mexico, endowed with more or less of the resources of the tropics. The extreme activities and large population that will soon cover the Rocky Mountain region in the United States will communicate its character to Mexico and overflow into it, as the activities of the Valley will flow into, influence and develop Central America. The restless habits of its people, the growing wealth and centralizing influence of the Valley will consolidate North America by making it the focus and heart of the whole. The political relations must depend largely on those of interest but may not necessarily require consolidation by annexing these outlying portions.

For the time has come, or is about to dawn, when reason and interest will unite men as accidental circumstances have heretofore separated them. Nations have thought more of the narrow relations and bonds which have originated common languages and united them under separate governments than of the wider one of a common humanity ; but these restricted views will disappear as relations become universal and interests draw them all closer together. The prices of produce and merchandize in London and New York are of the deepest interest to a large part of the world, for the income and general welfare of large classes are deeply affected by each of them somewhere. This community of interest and mutual interlocking of business, on a range as wide as the globe, has but lately assumed large proportions; but it will rapidly grow. This intimate interdependence is still more important within the limits of the United States and among the different sections of the country than any where else; soon it will be the most important point that enters into the consideration of general business and will continually render the different countries of America of the utmost interest to each other.

No point will become so important as that of harmonizing interests. Individual prosperity will depend more and more on discovering the true laws of business and allowing them the freest operation. The rule of reason and truth will be more and more enforced by the inexorable demands of interest. It has been seen that the great feature of Valley history has been the freedom with which all activity has been organized. If any restriction has been characteristic of later times it was not arbitrary, or enforced from without, but sprang up from within. If organizations became strong enough and were shortsighted enough to trench unduly on other interests there was free play for resistance by counter organization, or united action by the interests injured. This is the rule of reason and interest and, on the whole, proceeds quietly and naturally to correct evils. It is not easily to be imagined that this quiet and satisfactory way of managing great interests can be abandoned for a confused, arbitrary, or partial system of control.

Wisdom is necessarily gained by experience, and Anglo-Americans in the Valley and the country have proved themselves reasonable above all men, when it was much more difficult to see what was best than now, or than it can be in the future. It is not possible to suppose that they have reached the limit of good sense, and therefore the future will gain as in the past.

Intelligence has steadily developed, gained in clearness and comprehensiveness and taken the thorough and systematic form of science. The special business of science is to study all the details of a subject, or class of subjects, with the closest scrutiny till the laws involved are clearly seen and the action required to satisfy them has been discovered. Can society, that has been so wise in comparative ignorance, cease to be so when knowledge becomes comprehensive and well defined? Every impulse in man forbids his knowingly and deliberately acting against his own interests ; and the decided credit which accurate science has gained is sure to increase as it becomes more closely associated with the daily business of life.

The sum of intelligence was never so great as now ; no generation has ever received the intellectual training that is being given the generation now obtaining its preliminary education. They will come on the stage to take up the active work of life many degrees higher in mental fitness than their fathers. It can not be supposed that they will gain less in proportion from the practical education they will add to mental training, to their mastery of principles and accumulation of facts. They will take hold of the burdens and solve the problems of their time with a skill and success corresponding to their greater advantages; still larger advantages will be given to the generation that follows them as science discovers the truth more and more fully, and as better educational systems are employed. The ratio of improvement will, then, constantly increase according to the law of progress.

The constant progress of the past is a satisfactory security that, with the conditions improved, the progress will be more comprehensive and rapid. The situation in all departments of life at the present shows immense improvement when compared with any period in the past. Institutions have grown more secure; they were never so carefully organized and in so good working order as now; their results must be correspondingly more effective.

Since 1860 many and great dangers have threatened the existence and steady progress that had then become so apparently secure. The tranquility of society and the regular course of business were broken in upon by a civil conflict as great and destructive as the resources of the country and the resolute will and energetic courage of the Anglo-American race could make it. The difference in resources alone could and did determine the result. The majority ruled according to the democratic principle, even through war; but the great changes following the war were as distasteful to the overpowered side as they well could be. They were endured however, in a spirit and manner honorable to the race, at first in proud and haughty silence, and afterward with such efforts to retrieve their situation as prudence and their views of what was best and right permitted. That there should have been no disorders, no hasty, vengeful action, would have argued that there were no inconsiderate and shortsighted individuals or communities. It would have been wholly unnatural had such a crisis been passed with a display of absolute wisdom in *all* the people. Yet, the general conduct of the Southern people was wise, dignified and moderate. The situation was accepted without servility, but without resistance, which could only make it worse, and, when liberty of action was recovered, their moderation must have seemed conspicuous to an impartial observer. Their deference to changes which they had disapproved and resisted, which could no longer be successfully opposed, was marked.

The Southern people joined in the effort to restore harmony and make the best of an unhappy situation. When, later, a political deadlock, for which each party blamed the other and which involved the passions and violence springing from the war, seemed to endanger the peace of the country by rendering a satisfactory legal decision impossible, a compromise cut the Gordian knot. In this critical situation the South was not behind the North in moderation.

That crises so momentous were passed with so much equanimity; that prosperity and progress did not cease in such a furious conflict of passions, prejudices and interests, are the most remarkable and significant facts of American history. They show that American character has no superior. No possible future complication can be unmanageable where there is so much self-control and prudent forbearance. In the meantime the standard of public morality is being raised; the censorship of the public press and of legislative bodies is unsparing as unsleeping. The success and honorable estimation of both depend on the efficiency with which they serve public interests.

Educational systems are constantly more extended and every possible improvement is sought with anxious care. "Scientific accuracy" and thoroughness are being introduced more and more into every branch of public, corporate and private business. The standard of requirement for both character and knowledge is being constantly raised. All the conditions of the time, all its peculiarities and relations, tend to impart an ever-increasing thoroughness of practical discipline, a more accurate and comprehensive knowledge, to the masses of the people. The securities of the past and present for the future seem almost as valuable, as numerous and as reliable as could be desired.

It is quite certain that, with things as they are, and with the wisdom and good sense, that have been so conspicuous in the past, to guide events, progress and prosperity must be still more marked in the future. Mistakes and failures have taught the people where danger lies; by successes they have learned where safety is to be found.

One of the important securities for upright statesmanship in England is its peerage. The social distinction and hereditary wealth of its aristocracy raise them above vulgar ambitions. They have much to lose and little to gain by venality and a selfish exercise of power, and their intelligence and purity secure to them the esteem and confidence of the nation. It was to be seen if a thorough democracy, a radical republican people could obtain a class of servants as safe and upright without paying so high a price for them. It may be safely asserted that the history of the hundred years of American public life is honorable and reassuring. Only invidious party criticism could maintain the contrary.

Character and conduct are examined with merciless severity, and the unexplained shadow of blameworthiness is fatal to ambition. What the individual can not do in this examination is done by the press and by party criticism. So exacting has public opinion become that it may be considered among future certainties that public life must be more and more pure and high toned, more and more clearsighted and just in action.

Business must also share in this improving moral tone. The more massive it grows, the wider its relations, the more accurate must be its balance. Vast interests depend on honesty and careful adjustments, and universal intelligence affords ever less openings to those designing ill. The increasing enlightenment and liberality in the government and among the people at large raise the standard of morality and respectability in common life and make the censorship of public opinion ever more effective. Success will become constantly more difficult for the wrong doer.

With these social and political adjustments, general prosperity is certain to proceed with a freedom from checks and a rapidly widening and deepening volume that have never before been known. Skill and experience have been joined with a vast capital and facilities for using them with an effect that no generation but this has ever possessed. All these will continue to accumulate more rapidly hereafter. A long financial depression closes with a revisal of methods, a readjustment of investments and of labor, and prepares for a more favorable future.

And what could be more favorable than the prospect before a people who have struggled through difficulties of appalling magnitude until the very excess of attainment in setting them aside became a temporary embarrassment? Nothing really desirable can be impossible where so much has been so easily achieved. Where can prosperity be greater or more certain than in the Mississippi Valley with a trained, wise and skillful population whose preparations for developing its illimitable resources are fairly adequate to their needs? What can stand in the way of a nation that has been so true to its principles and mission, that has not been discouraged in the storm and whirlwind, has ejected all real causes of disquiet, is fairly equitable to all classes and all sections, and finds itself at the real commencement of its career with a territory so great and so rich, a series of commercial relations so admirable, and a people so thrifty and intelligent? With a situation so conspicuous for advantages of every kind it would be impossible for America *not* to achieve an eminence of prosperity and power unknown to any other nation or region.

In moral greatness, in giving the best chance to all its people without distinction, in dealing vigorously, justly and naturally with all the vexed questions of the past she is far beyond the foremost nation. In material wealth and volume of commerce she is now second, but must necessarily soon be first.

Progress, with the Republic, is a process of development more natural and more consistent with the interests and ambitions of others than with England. America is a world in itself; England a narrow island whose prosperity depends upon a world-wide trade. The Republic has ample room, ample resources in herself and ample opportunity for the gratification of a wise and peaceful ambition in the neighboring regions of her own continent. She could scarcely become stronger by absorbing the territory of British America, of Mexico, Central America and the West Indies. In time, her industrial and commercial activities may gather all the benefits her people could wish from intercourse with these countries, while they develop politically under their own law.

Before her own lands are completely occupied and all her resources developed to their fullest capacity, a brighter day will dawn on the nations so troubled by vain and hurtful ambitions. They will have learned to devote themselves, with all the zeal of Anglo-Americans, to the more profitable pursuits of industry, to the development of their resources and to the maintenance of the order and quiet which peaceful pursuits require. Like America, their people will learn to content themselves with acquiring solid wealth and power, developing by internal strength, intelligence, and liberty. Free interchanges with the Republic of the Great Valley will give to each the substantial advantages most desired, and the family of nations will learn to live together as harmoniously and as usefully to each other as does the family of States in the American Union. The world of nations will then be a Federal Republic, not by force and by organic unity, but by interest, reason and common consent. The Valley will be the great center of wealth, of organization and influence to the two Americas. The Gulf of Mexico will be possibly even more important than the Atlantic and Pacific, for it lies between the two most magnificent Valleys in the world—that of the Mississippi and the Amazon—which will be, in time, the complements of each other.

The industries, the commerce, the energetic activities of Anglo-Americans can never want room to expand so long as they shall be eager for fresh fields. Home commerce and trade, interchanges between the two Americas, must finally be many times more important than intercourse with Europe or Asia. It is possible that the great rivers of the Valley can not be made to answer but a small part of the demands of trade, and that the railroad may ever be the most important reliance of the immense activity of the Valley; but its rolling waters will still point the way that a large proportion of outward bound exchanges must take. The countries about, and the islands in, the Gulf have remained undeveloped, but the time for them to lie fallow is nearly past. A vast and prosperous activity will gradually grow up and will double the wealth of the Valley, while theirs will be increased a thousand fold.

Such are some of the splendid probabilities of the future, apparently the necessary fruit of the freedom and the expansive energies of the people of the Valley. America showed the possibilities for good of a thorough democracy that gave every man the chance to make the most of the powers lodged in him by nature. Her democracy has established the value of freedom for all time and for the whole world. It *ripens* men, brings out their hidden qualities, their latent abilities to be useful to themselves and to others and to bring to perfection the highest and truest civilization. When the Spanish-American Republics shall have caught, or grown up to, the perception of the real cause of the greatness of the United States, they will advance with astonishing rapidity in the same direction, stimulated and supported by the model Republic. For this result there is everything to hope and little or nothing to fear. The certainties of the future are almost inconceivably great, and the possibilities are wholly too wide and grand to be grasped by the imagination.

PART FOURTH.

THE TWO SLOPES—WEST AND EAST OF THE VALLEY.

The Mississippi Valley has been spoken of as lying between two other regions whose resources, natural and industrial, are very different from those of the great central alluvial plain as well as from each other. They have each outside relations by their respective oceans, through commerce, that are scarcely less important to other sections of the country than to themselves.

The Valley is, first of all, agricultural. However great its manufacturing and mining may become, that industry must always take the lead from its geological structure, its great extent of fertile soil, its climatic conditions and its ready relations with populous Europe. The East, or Atlantic Slope, starting as a string of English colonies along the coast, devoted almost wholly to agriculture, soon developed commerce, and then manufactures, till it has become one of the centers of the world for those interests. The West, or Pacific Slope, so far as it is Anglo-Saxon—and its real development began with the advent of that race—is little more than one generation old. Its leading attraction has been mining, although agriculture has won singular triumphs in the fertile and better watered basins and valleys. Ultimately its commerce must develop to immense proportions, and manufacturing is likely, in the long future, to flourish to an extraordinary degree.

Notwithstanding the prominence that has been shown to belong to the Great Valley as the seat and center of a new and remarkable race, the Anglo-American and its model

Republic, it, still, contains but a part of that race and is only one of the sections of the republic. It gave a field, most rare and suitable, for the exercise and expansion of the peculiar qualities of the race after its basis of character and development had been acquired on the Atlantic Slope, and prepared it for a special and kindred form of growth on the Pacific Slope and the Great Mountain Plateau. Each of the sections has impressed, and is impressing, on its inhabitants special qualities varying in harmony with the Geological and Historical past. They unite in the most admirable and valuable way to constitute one country and nation. Each has become quickly prosperous and rich through its connection with the others. It would be difficult to say which has conferred the most and largest benefits on the others, if the Valley had not predetermined the question by its greater available surface, the variety of its colossal treasures, and the extreme readiness with which it surrenders them to the intelligent industry of the remarkable race that settled it.

This section can not be perfectly understood, nor can the extreme promise of its future be fully comprehended, without a tolerably full display of the character, resources, condition and relations of the two others. Some chapters, therefore, will be given to each of them.

CHAPTER I.

THE PACIFIC SLOPE—HOW IT WAS FORMED.

The mountainous regions of the West within the United States are about one thousand miles in width by not far from two thousand in length. There is first a high plateau with a general elevation of 5,000 feet above the level of the sea, though it varies in places between 4,000 and 7,000. On the east this elevation extends far into the Valley. From this great average hight of about one mile (5,280 feet) spring a series of lofty mountain ranges, the higher peaks of which rise about twice as much farther into the upper air, or from 12,000 to 15,000 feet above the sea level.

What produced such a vast elevation of a region so wide and extensive? A general answer will be found in the first chapter of Part First, where the forces adequate to such an immense result are discussed. These forces were connected with the cooling of the earth, the gradual thickening and contraction of the hard crust above a sea of liquid rock. So great a result as the Rocky Mountain plateau and its elevated ranges could not have been obtained in the earlier part of the earth's geological history, because the crust was then thinner, would give way more easily, and be less able to support itself, or find support, if raised so high. The masses which form mountains, and the rocks that rest against their sides, tell their comparative age with great clearness and certainty to a person who has learned to read the narrative they have to tell. It is one of the most positive and unmistakable among the many classes of facts they have been commissioned to reveal.

They do not, indeed, speak in human language, and so do not measure by years; yet they have a very accurate measure of their own which has only to be translated to give us a fair idea of what is geologically young and old. It is as yet difficult to express geological measures of time in figures with a certainty of being nearly exact; yet some very learned men, whose studies and conclusions have been received with great respect by those who are the best judges of their value, have called in astronomy to assist in the computations and have given us figures which are now finding general acceptance as at least approximations.

Sir William Thompson has estimated the time that has passed since the Life Force first began to produce vegetable and animal organisms, traces of whose remains are found in the early rocks, at one hundred millions of years. This is a period too long for us to realize, and yet it is some thousands of times shorter than some geologists claim.

The comparative length of the three great geological periods of time since life began on the earth has been estimated, by authorities of the highest reputation, as twelve for the Palæozoic—the Ancient or early period—three for the Mesozoic—or Middle period—and one for the Cenozoic, or Recent period. This would give something over seventy-four millions of years for the Ancient Time; eighteen millions for the Middle Period; and six millions for the last Period reaching to the present. Some parts of the Green Mountains, of Vermont, and the low Laurentine range north of the St. Lawrence, in Canada, date back to about the beginning of the estimate—or one hundred millions of years, if the above estimate be allowed. The Alleghanies were raised about the close of the Palæozoic, or Ancient Period, and so are nearly seventy-five millions of years younger; while the Rocky Mountains and the high plain on which they stand were raised some twenty or more millions of years later. The elevation commenced near the close of the Mesozoic, and was not fully completed till two-thirds or more of the Cenozoic had passed. The above estimate of one hundred millions of years is not considered by men of science as final; yet there are many strong reasons for believing it near the truth. Closer study may change the verdict, but the more careful the recent study has been the more have geologists been impressed with the idea that time is long, that nature has been infinitely deliberate in her work, and that vast periods must be allowed.

The raising of the Rocky Mountains was not all done at once, as to the plateau or the various chains of high peaks. The Sierra Nevada and the Wahsatch ranges are among the oldest—the ranges in Colorado and Montana, and the Coast ranges of California, Oregon and Washington being a later product of the elevating force, the time occupied from first to last being some millions of years. It will be remembered that Cenozoic, or Recent Time, is divided into two great Periods, the Tertiary and Quaternary. The Tertiary is subdivided into the Eocene, Miocene and Pliocene Eras, and the Quaternary into the Glacial, Champlain and Terrace Eras. The permanent elevation of the Rocky Mountains commenced just before the beginning of the Tertiary and was about completed at its close. Small changes have been in progress down to the present, yet the Rocky Mountain region was, at the beginning of the great Ice Age (or the close of the Tertiary) substantially what it is now except the surface changes produced during that Era and later. Geologists do not attempt to determine the actual space of time which passed during the lapse of each of the periods and eras, but the six million years which Sir William Thompson's figures would assign to the Recent Period, or Cenozoic, would allow three to five millions to the Tertiary.

That is a very long period; but the elevation of the vast plateaus and mountain peaks of North and South America must have been almost inconceivably slow. A sudden and rapid exertion of the forces required to accomplish it would have broken up the whole crust, so as to render it useless for the purposes of man, if it had not produced the destruction and scattering of the whole planet. To render the surface of the earth fit for the support and purposes of the human race, in harmony with and through the operation of the known properties and laws of matter, required these vast lapses of time, and a carefully restrained operation of the immense forces brought into play.

Accordingly, this region was first provided with a very firm and thick floor, which could be raised as a whole, and remain in position when raised, while the majestic forces were allowed a vent and relief along the many lines of fracture, or greatest weakness, where the crust was slowly broken and thrust up miles into the upper air. When the strain became too great and threatened destruction, an earthquake would rend the rocks in places, numerous volcanoes would pour out torrents of gas and smoke and flame, along with the vast mass of liquid rock that ran in a fiery flood over all the neighboring regions, and cooled into lava sometimes thousands of feet deep. In this way volcanoes were safety valves, easing off too severe a strain, while at the same time contributing very largely and in many ways to the preparation of the surface for human uses. The mass of mountain and elevated plain was made higher, some of the extreme roughness was covered, much valuable chemical matter that was afterward to enrich mankind, was brought out from the mysterious depths of the interior of the earth, and, above all, during this fiery outpouring—at least a part of it—the chemical laboratory that produced or collected gold or silver, and some other rare and valuable minerals, was set at work and its vast crucibles kept sufficiently heated.

Thus the raising of so much bare rock above the general level, which prevented their being covered with soft earth and soil and made useful for agricultural purposes, was counter-balanced by the creation, or collection, of boundless mineral stores of the most valuable and attractive kind. While the rocks were yielding to vast pressure by opening gaping cracks and fissures, and the sea of fire beneath was thrusting up its foaming waves through every deep crevice, the intense heat developed in their neighborhood drove chemical agencies into the liveliest action. Hot alkaline solutions of silica and other rock filled the opened cracks which lava did not reach and collected, apparently, by chemical attraction gold, silver and other minerals from the heated region about them into these crevices. They cooled in this position and formed veins, lodes and nuggets of precious metals, and made the Rocky Mountain region in general one enormous mine of incalculable wealth.

This elevation, as has been said, was so gradual that the general floor was broken only along the lines of higher elevation. Extensive regions remained comparatively low between, or outside, the ranges, and the grading down of the elevations by the atmosphere, snow, ice and running waters, gathered in them a remarkably large mass of earth to form a rich soil. Central California is a great basin, some 450 miles long by 65 broad, bounded by the Sierra Nevada on the east, and the Coast Range on the west. The great Utah Basin is several times larger, though divided into two unequal parts by the Wahsatch Range. Many basins besides, various in size and elevation, are found over the whole region. Placed so as to receive large quantities of rock ground into fine earth, beyond measure rich in chemical material for the support of vegetation, their productiveness is only limited by the supply of surface moisture. This is very unevenly, and, in many cases, most inconveniently furnished. Yet the mountain ranges are huge condensers and collect vast quantities of moisture from the clouds, which they generally relieve of their burden in the form of snow. This, melting and falling in mountain torrents into the basins and valleys, forms a multitude of streams and lakes which may be distributed by man when his needs call for it, so as to secure the larger part of the value, perhaps, of the extremely rich stores of agricultural material. Parts of the general region—especially the northern part of the Pacific Slope proper, westward of the higher ranges—are well watered as it is, and extremely productive with moderate labor.

Such, in general terms, is the Mountain Empire bounding the Great Valley on the West and bordering the Pacific Ocean. The river systems are naturally as disconnected as the agricultural areas, and available for purposes of commerce only to a limited degree. Yet, joined to the long line of coast, they are destined to great and most valuable uses. California, not very far from its center, has a break in its coast line, of no great width, but answering all the purposes of ocean commerce, and a deep, land-locked bay extends in various arms far inland, furnishing as good a port and medium of communication with the central valley and the outside world as could well be conceived. The Sacramento River receives the collective waters of the upper valley and conveys them to this bay, the San Joaquin performing the same office for the lower valley. The regions about the bay are therefore the lowest in the valley, and the rivers serve the purposes of internal commerce and communication for some distance on their lower courses, railroads connecting the more distant parts with the center.

Oregon and Washington possess a large river in common—the Columbia. By its various branches, it drains several extensive regions both north and south in the interior basin, or plateau, between the mountains, collecting waters from the borders of the Utah basin southward, and also from British Columbia far to the north. Several hundred miles of its course are navigable, though interrupted by rapids at different points. The distance of unbroken navigation from its mouth is 160 miles.

The Colorado River is the third large stream of the Pacific

Slope. It drains a very large region, much of which is a high rocky plateau. It is capable of being used as a commercial highway several hundred miles from the point where it empties into the Gulf of California, at least during high water. Its mouth is near, but not within, the limits of the United States. The territory it drains is the driest, and, in some respects, most forbidding on the Slope; yet, so far as can now be estimated, it is the richest in minerals, and its valleys and plateaus, wherever they can be irrigated, are of remarkable fertility.

Thus, this vast mountain region is one of great extremes, of violent contrasts. At first sight this sea of mountains, rocky plateaus and rainless basins seemed a desert—almost the ideal of desolation. The few valleys and oases in the midst of bare rock and alkali deserts appeared practically inaccessible, at least for purposes of useful intercourse with the civilized world, and seemed to be capable of supporting but a very limited number of human beings from their own resources. Even the approaches to it wore a forbidding look. The vast plains of the Western Valley were so lightly watered as to bear the appearance of a desert the larger part of the year. Arid and hot in summer, the fierce blasts of the Arctic North swept over them in winter. California, lying on the coast, seemed more favored; yet, the portion directly on the ocean, only part of which received sufficient moisture in all the seasons, was limited by a range of mountains several thousand feet high not far inland, and its central basin received abundant rains only during the winter months, the rainless summer parching and destroying vegetation over much of its broad expanse, and seeming to bid defiance to the agriculturist, except in favored spots. Stock might find abundant pasturage during the rainy season, but must be limited to such numbers as could be supported by the less arid uplands during the drier seasons.

The northern coast seemed to be more favored, the river system of the Columbia giving readier access to the interior and the form of the continent in the North opening the region back of the Coast Range somewhat more fully to the moisture-laden winds from the warm ocean current that sweeps across the North Pacific from the Indian Ocean past China and Japan. Here, next the ocean, was an immense forest, yet bounded on the east by lofty mountains and a vast breadth of lava fields, rocky valleys, range after range of mountain heights, and the sterile plains of the Missouri beyond. The distance by sea to civilized lands seemed to place any extensive use of the valuable timber and fertile soil in an indefinite but far-distant future.

Such was the apparent condition of the mountain and coast areas to the eye and apprehension of the European, so far as he was able to learn during the sixteenth century, and such it continued to appear for about three hundred and fifty years to civilized man.

CHAPTER II.

ARIZONA—THE LAND OF PLATEAUS.

The early civilizations of North America were more embarrassed in growth and more frequently broken up altogether than those of the Old World. The more imperfect development of those which continued to flourish must have been due in part to unhealthy disturbance; and the relics of lost races, the very memory of which had vanished even from the localities where they left what has not yet perished of the record of their organized industry, show the greater disadvantages that attended progress on the Western than the Eastern Continent. America was too simple and broad in the outlines of its more favored regions, and these were too readily overrun by wild highland tribes, to favor a strong and many-sided growth.

Tartary, Scythia and Germany always swarmed with roving, restless tribes, whose character and manners were as stern as their climate. They were always a terror and danger to the civilizations further south, but the readiest openings to their wanderings were east and west. High mountain ranges on the north protected Oriental, Greek and Roman civilization. The Rocky Mountain plateau seems to have been as prolific in fierce hunter tribes as those Old World regions in rude wandering warriors. They grew up there robust, healthy and aggressive. disposed to seek a more favored region, but finding it only in the direction of a progressive people.

As the Teuton, Hun, Slavic and Tartar tribes of Northern Europe and Asia from the beginning of history were a constant menace to the warm, rich countries of the South, so the Rocky Mountain tribes were ever pressing eastward to the Mississippi Valley or south along the plateau towards Arizona or Mexico. The specialty of the Pacific coast, for these primitive men, was its fisheries, which did not greatly invite the hunters of the interior in the North, and in California the hot, dry climate was not favorable to a large population of hunters. They do not seem to have much troubled, or mingled with, the coast tribes of Upper and Lower California, who, not being required to develop intelligence and energy in self-defense, degenerated. At least, what is known of them from the reports of the first European explorers indicates a lower type of character than elsewhere then, as in still more modern times.

It would seem that the Mound Builders of the Eastern Valley of the Mississippi long enjoyed complete immunity from attack, although the fact that they did not occupy, to any great extent, the large and fertile territories on the west of that stream would appear to imply some obstacle in that direction. But their civilization was too weak in progressive elements and too imperfect in structure to hold its ground, in the end, against the growing numbers of the fierce hunter tribes and they perished. They were not as fortunate as the Toltecs of Mexico in the twelfth century. These cultured people were conquered by the Aztecs, in arms, but were able to civilize their conquerors and commence a new era of progress, as did the Etrurians, and the Modern Latins when conquered by the Goths and Huns, the Franks and Saxons.

Arizona, with some parts of Colorado and New Mexico adjoining, is a region of plateaus—" mesas," or table-lands, the Spaniards called them. This structure was caused by the elevation of the whole region forming it at the same time so that the layers of rock—laid originally in water many thousand feet below their present altitude—did not lose their horizontal position during the elevation. This, at least, seems to be the prevailing fact in much of this region, especially for the higher deposits. There were, however, many breaks in the crust of this vast elevated table through which rocks lying underneath were thrust up, forming many mountain chains whose loftiest peaks rise twice as high above the level of the sea as the general surface of the plateau. The nucleus of these mountains is generally granite—the original solid floor of the first universal sea, on which the various classes of stratified rock accumulated for a hundred millions of years, perhaps.

When this plateau and these mountains were raised, began that opposite process of leveling and washing away to the sea which has caused a great part of the constant accumulation of rock, in every age, at the bottom of all waters. As each age and region contributed to the rocks it made some part of the remains of its characteristic vegetable and animal life, the geologists thereby found a clue to the history and changes of the past. But this plateau seems to have been much what it is now in climate since it was first raised. It has never been generally and freely watered by the clouds; it was so far south that the small amount of moisture it did receive on its levels and gentle slopes immediately ran off or evaporated and left the rocks bare and dry; while the snows of its mountains melted only to hurry with mad haste to the ocean by the readiest channels.

Its streams, therefore, have worn deep channels through the solid rock. These rocky gorges are called "Cañons" and constitute one of the most remarkable features of the region. The leveling process of past ages has here been more than usually confined to the production of these deep and narrow cavities, in the bottom of which the general mass of waters gathered from the whole region rushes swiftly down a steep incline to sea level. They are so confined, the descent is so great for long distances, the rocks so uniform in hardness or softness, and they carry along so much gritty material to scour the rocks at the bottom of the stream, that they have produced effects of singular magnitude and impressiveness.

The Colorado River is about 1,200 miles in length. Its Great Cañon is 400 miles long and has, through almost the whole distance, a depth, from the top of the plateau to the surface of the river, of 4,000 to 6,000 feet. For the most part this immense gorge has perpendicular sides. Usually there is very little or no space between the stream and the smooth upright wall of rock on either side, and breaks in the continuous surface of this wall have been made only where a side stream has worn a collateral cañon back to a greater or less distance by the same friction of its waters during unknown centuries.

This long narrow trough, worn in solid rock from three quarters of a mile to a mile and a quarter straight down toward the center of the earth, and that for a continuous distance of four hundred miles, is unrivaled by a wonder of equal magnitude in all respects in any part of the earth. The great power of a running stream is here illustrated to the utmost, and produces an astonishment in the beholder quite beyond expression. Most of the streams of this elevated region have worn similar cavities, more or less deep, in some part of their course, although many of them have fine, fertile valleys of considerable width which furnish unrivaled facilities for prosperous agriculture.

The great Colorado plateau, thus seamed with deep cañons by the main river and its branches, occupies the northeast part of Arizona. Much of the higher level is 6,000, and some even 7,000, feet above the surface of the ocean. On its southern border runs the largest branch of the lower Colorado, the Gila River. This rises in New Mexico and flows almost directly westward across the southern center of Arizona. Its valley contains much fertile land with the stream available for irrigation. It has deep narrow cañons only in its upper course. Many streams flow into it, along and between which are extensive, and comparatively level, surfaces that may be irrigated.

The lowest part of Arizona is at the southwest, where the level descends within 100 feet of tide water. Several hundred thousand acres of valley land, suitable for cultivation, lie along the Colorado below the terminus of the Great Cañon. The plateau in the western center of the Territory, not being more than 4,000 feet in elevation, and its streams cutting into the rock with general moderation, contains much agricultural land. Anciently the high plateau above the Gila and east of this lower bench was crossed from west to east by a line of volcanoes whose fires are now extinct. Many thousand square miles of the plateau have been deluged, in the neighborhood of these former craters, with lava. It is one of the large lava fields of the world, and presents a vast sum of hopelessly bare rock, beneath which is probably concealed a great amount of mineral treasure. Several chains of mountains cross this high plain from northwest to southeast, with level spaces between on which there is more or less pulverized rock, furnishing material for a rich soil and some good opportunities for irrigation from the mountain streams.

Some extensive forests cover the mountain sides here. One is said to be 400 miles long—part of this lying outside of Arizona—and forty miles wide. Many rich valleys and grassy levels appear, as the Colorado and New Mexico line is approached, highly promising, it is said, by the few explorers who have seen it, for the future farmer and herdsman. Yet these favorable features are, in appearance, local. The general aspect of all Arizona is one of sublime desolation.

South of the Gila the surface rocks have been more disturbed by volcanic forces, and many chains of mountains are found of various length, height and direction; yet the character of a plateau remains. A comparatively level belt in this latitude crosses the whole mountain plateau to the Rio

Grande River and the head waters of the affluents of the Lower Mississippi. It is said to be nowhere over 4,000 feet in height and is the most suitable route for a trans-continental railroad—so far as difficulties of construction are concerned—between the Mexican and British American boundaries. In the beginning of 1880 a continuous line from San Francisco had already been extended far up the Gila Valley, and its further construction was being rapidly pushed on eastward, while a road from the east had then reached the Rio Grande, to be extended both to the Gulf of California, at Guaymas, in Mexico, and to the Pacific, in California.

CHAPTER III.

PREHISTORIC ARIZONA.

Arizona, until recent years at least, has been to the European a land of more mysteries, terrors and dangers than any other part of North America. Its apparent sterility was very great, the Indian tribes roaming over it were remarkably fierce, great changes appeared to have passed over it, uncertain rumors of its vast cañons have been fully verified and defined by scientific exploration but lately, and romantic legends like those told by the Aztecs to Cortez have been more or less current in every generation since. The belief in hidden treasures seemed countenanced by the "planchas de plata," plates of silver, talked of by the adventurous missionaries of a hundred years ago. They found remarkably rich deposits of almost pure silver, and, putting their treasure under military protection, it was confiscated by the Spanish authorities. For this reason, and because of growing danger from the Apaches, open investigation ceased. Unsatisfied curiosity exaggerated, or, it may be, invented, tales still more marvelous.

These mysteries and fearful surmises are now being dissipated as far as science and enterprise can do it; but there is one which appears more likely to remain unsolved than those which surround the works of the Mound Builders in the Mississippi Valley. It regards the origin of its prehistoric relics—the story of a lost race which left behind it ruins of large towns, irrigating canals of great length, and various evidences of a civilization still better organized, in some respects at least, than that of the ancient agriculturists of the Great Valley.

These ruins were more striking and impressive than those of the Mound Builders, because they consisted of brick and stone, and were evidently the remains of the habitations of the people who produced them. The region in which they are situated was so bare and desolate, and contained so few other objects to attract attention, that they became the subject of inquiry and speculation to the first Europeans who sought to find there new communities to plunder and new stores of gold. When Mexico was conquered, in 1521, various rumors and legends, dim and undefined, hinting of a variety of wonderful things in these depths of the continent, excited the curiosity and cupidity of the Spaniards. In 1535 an adventurer, who was shipwrecked on the coast of Texas, wandered across the upper Rio Grande, and made report of towns and fortresses and organized industries. He does not appear to have penetrated farther than the head waters of the Gila and other eastern tributaries of the Colorado, in western New Mexico. The Gulf of California had already been discovered, and a zealous missionary priest, in 1739, sought to penetrate to this region of marvels from that side. The Aztec legends of the "Seven cities of Cibola" seems to have been suggested by the Moquis, Zunis, and others, near the border of New Mexico. These the priest, Padre Niza, set out to find. He seems to have penetrated to the lower Gila, and speaks of the great ruins still found there.

He took back to Mexico a most wonderful and attractive account of the Seven Cities, one of which was Cibola. According to him it was another Peru, and visions of boundless stores of gold awaiting seizure seem to have originated the expedition of Coronado, in 1540. Various branches of this and connected expeditions, in the course of the following two years, seem to have made a general reconnoissance of the whole plateau region, from the Colorado River to the Rio Grande and the western tributaries of the Mississippi in the same latitude. They went up the Colorado from its mouth a long distance, visited the lower Gila, penetrated from the

Pueblo villages in New Mexico northwest to the Great Cañon of the Colorado, and fairly solved, in the negative, the question of cities where gold was as plentiful as stones. No large stores of the precious metals were found, although there were indications of mining wealth in New Mexico. Such communities as were in any degree civilized—and there were many of them on the eastern border of Arizona, and in the Rio Grande valley—were industrious but poor. They gained a frugally comfortable living from cultivation of the soil. In the mountainous or plateau regions their houses were fortresses, and commonly built in situations difficult of access by their enemies, the wild tribes.

These explorations led to the ultimate establishment of Spanish authority and civilization in New Mexico and to more or less mining there, but produced no result as to Arizona, except a shudder at its desolate aspect, and some observations and inquiries as to the ruins around the western and southern base of the high plateau. The Pimas and Maricopas were located then, as now, on the lower course of the Gila. Very slightly civilized, they still lived by cultivation. They could not explain the ruins. Their traditions seemed to extend backward about 400 years; but the "Casas Grande," or great stone houses forming the ruins, were then abandoned, and were, apparently, as great an enigma to their fathers of the thirteenth century as to themselves, of the sixteenth. Evidently, several centuries had, at that distant time, already passed since the houses had been occupied, the "acequias," or irrigating canals, filled with water, and the desert lands covered with bountiful crops. The early centuries of the Christian Era, when modern civilization was striking its first roots in Western Europe, would seem to be the latest reasonable date to assign as that of their abandonment.

There is not, however, as yet, much detailed data on which to found theories. From 1540 down to 1850 the Jesuit and Franciscan Fathers who founded Missions in California and northern Mexico seldom penetrated to the region of the ruins, and then hurried away as quickly as possible from a land which held few attractions and many dangers for them. About a hundred miles south of the Gila, and also far from the ruins, a series of Missions was established in the eighteenth century; but the power of the fierce Apaches seemed to rise and increase in hostility as that of the Spanish dominion in Mexico became enfeebled and lost control of the distant border tribes, and the adventurous priests must be constantly ready to suffer martyrdom if they offered themselves for this field of labor. It must be said, to the credit of their zeal and sincerity, that such devotion was not wanting, and of forty-seven who were stationed at the Missions on the southwestern borders of Arizona, half, at least, died or were massacred by the Wild Hunter tribes. But they were successful in acquiring influence among those they actually taught and some fruit of their self-sacrificing labors still remains.

Yet, as elsewhere, in proportion as the tribes submitted to European or Christianizing influence they lost their native vigor and required civilized protection from their natural enemies. When their protectors and guides, the Catholic priests, were murdered or driven away they diminished in numbers and prosperity, so that, when this region, between 1850 and 1860, became a part of the territory of the United States, the Missions were mostly in ruins and the natives for whose benefit they had been built were but a miserable remnant.

From this time until the close of the Civil War many Americans made visits, official or adventurous, to southwestern Arizona. Some mining and farming operations were undertaken, and various ambitious plans were conceived with respect to the adjoining Mexican province, or State of Sonora. One American and one French military adventurer collected some hundreds of rude men from California and other borders of civilization, as then existing, armed them and undertook expeditions in the direction of Sonora. All these attempts came to a sad end, or only resulted in flying trips through the region of the ruins.

After the title to Arizona had been acquired by that Republic, various scientific expeditions under the direction of the Government of the United States, usually in charge of an army officer with a scientific corps attached, explored the plateau. These had reference especially to the topography, or surface features, of the country, to its geology, minerals, and other resources. Their labors were more especially directed to the higher plateau, the Colorado River and Cañon, and the streams in general. They could not delay to make a careful survey of the ruins, or a special study of the localities in which they were found, further than was required by their general plans.

For many years after the War and until very recently, the Indian tribes, especially the Apaches and branches of their race, were very hostile. They imagined that the withdrawal of the troops at the beginning of the war was due to their own successful resistance and the discouragement of the white man. A long and savage warfare was necessary to subdue them and correct their mistake. This was carried on under many disadvantages. Arizona was reached only by long and difficult routes, and had no internal sources of supply that could be readily developed. Both agriculture and mining enterprises must wait for more favorable times. When the Southern Pacific Railroad approached Yuma, on the Lower Colorado, near the mouth of the Gila, this class of difficulties began to disappear, the Indians had been fairly disciplined, and a new era was opened for the regions thickly peopled in prehistoric times.

During this quarter of a century of American adventure—for it can not be called occupation—the old Spanish accounts of the ruins left by the still unknown prehistoric race have been confirmed and much enlarged by a great number of observers. But they must be collected together to obtain all the information so gained, even in regard to the various localities. No one person has made them a principal study or concentrated on the ruins of any locality the prolonged and critical attention necessary to ascertain all the facts that are, or were, accessible. Competent observers have been able to give the public but a hasty passing glance—the few statements they could verify in the brief time other aims allowed them. Those who have enjoyed more ample opportunities have been unfamiliar with the carefully exact methods by which modern science has been so highly distinguished and so successful in gaining valuable results. The ruins, therefore, still await proper study, and may be able to reveal far more than is now anticipated. Taken in connection with the revelations of the mounds of the Great Valley, the ancient ruins in Central America, and the history of the Toltecs and Aztecs of Mexico, they are of great interest, and should be carefully studied for additional information concerning the prehistoric civilization of America.

None of these ruins are recorded as having been observed on the Colorado River in its lower course, and where they approach the Great Cañon on the northern boundary of Arizona they seem, generally, to become caves carefully built up in front and entremely difficult of access. Few were found within a hundred miles or so of the western border of the Territory. They abound in all directions in the region of Prescott, thence south to the Gila and eastward up the valley of that river, but have not been noted very far south of it in considerable numbers, although a few are spoken of at a long distance even in Northern Mexico. If the modern Moquis, Zunis and Pueblos of New Mexico—who now build houses in many respects similar—be counted, the region inhabited by stone house-building agriculturists would mostly be included in an oblong square of about 400 miles from

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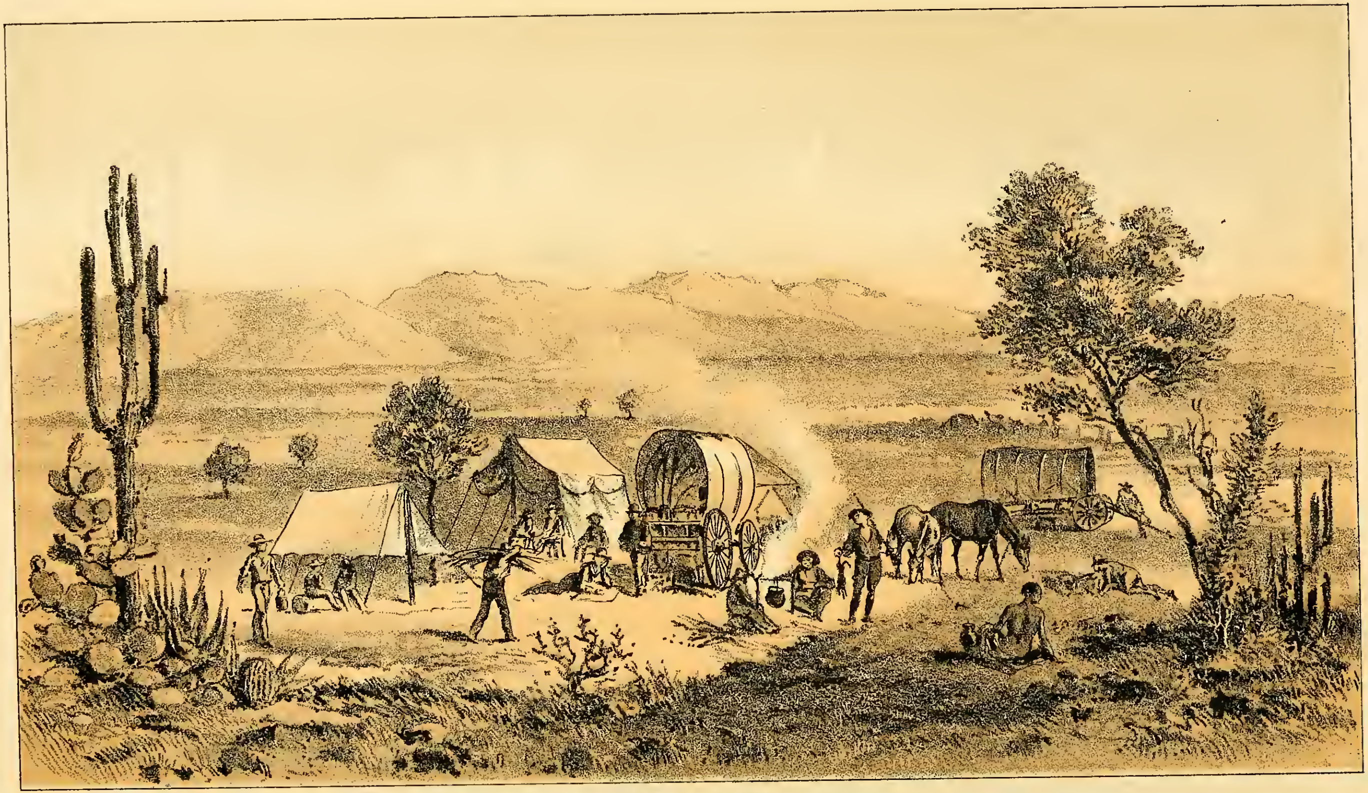


A CENTER OF ANCIENT CIVILIZATION,
MARICOPA WELLS, ARIZONA.

east to west and 300 from north to south, omitting the ruins of Chihuahua. Those with which we are chiefly concerned lie mostly in the smaller space mentioned—along the Gila and west of the higher plateau of the northeast section of Arizona.

It is here that the evidences of irrigation are noted on a large scale. Canals twenty, and even forty, miles long are found. They were built with skill, were large and capable of conveying vast supplies of water. Some have suggested that the ancient civilized race which built and cultivated here was driven away by the gradual drying out of the country; but the artificial water channels indicate much the same condition then as now, and we have seen that the deep and narrow cuttings of the streams point toward surface barrenness from the beginning of the present relative condition of things, or from the close of the period of special elevation. It can not have been much changed within a few thousand years.

Some two hundred miles east of Yuma, and on the south of the River Gila, in the midst of an extensive plain, are the "Casa Grande" ruins. Besides the one massive building still partially standing, there are evidences of former habitation for miles around. The first observers speak of this house "as a large edifice, the principal room being four stories high." This was surrounded on all the four sides with lower stories, of which the outer walls were about five and a half feet thick. These walls were of concrete, or adobe material, and not of stone proper. In that dry region it becomes very hard and durable. The inside of these walls was covered with a smooth cement. "They resemble planed boards, and so polished that they shine like Pueblo pottery," says the old Spanish observer. Broken pottery made of fine clay was scattered about. A large canal encircled the city and could be traced twenty miles to where it received water from the river to distribute over the plain and perhaps also serve as a moat or defence for the town. It was about twenty-eight feet wide and eleven feet deep.

This description was given over three hundred years ago, and about three quarters of a century before the Puritans landed at Plymouth Rock, in Massachusetts. The rest of the town was then little better than a heap of dust, and this "Casa Grande"—or great house—although less complete now than then, has well withstood the ravages of the three hundred and forty years. The traces of other buildings are still discernible, as also of the aqueduct, and it might well have taken twice or three times that period, at the least, to produce the ruin then discernible from the condition in which they were when first abandoned. Another account of Casa Grande, after giving substantially the same statement in regard to the building, speaks of twelve others at some distance falling into ruin, and of ceilings in the Casa Grande, which, except the lower, appeared to have been burnt. These lower ceilings forming the floor of the second story were "of round timbers, smooth and not thick, which appeared to be cedar or savin (pine), over them sticks of very equal size, and a cake of mortar and hard clay, making a roof or ceiling of great ingenuity." Ruins "circumscribe it two leagues, with much earthenware of plates and pots of fine clay, painted of many colors, and which resemble the jars of Guadalajara, in Spain." This writer thinks half the volume of water in the river might be turned into the main canal, twenty-eight feet wide and eleven deep, to protect the city as a moat, furnish it water and irrigate the surrounding country.

It must have been a numerous, well-ordered and thriving people who once made this now desolate plain green and lively by their industries. Its capacities are the same still and it will soon recover more than its ancient agricultural thrift. Only stone implements have been found, indicating a lower stage of advancement than that of the Toltecs and Aztecs of Mexico in the time of Cortez. No sculptures are noted, except in pottery, no indications of the thousand details which one trained to close study might have found. Many of these will, no doubt, be hereafter obtained, so that we may, to some extent, live their lives over again and write a tolerable history of their career.

Tanks or reservoirs are sometimes found in natural depressions which are now dry, and the resources of the soil were evidently utilized with great effect to support the large population. Sometimes a large canal divides into several smaller ones and the grade is always found to be perfect. They must have been good engineers, this lost and forgotten race. Some pyramidal structures have been met with; some mountain tops have been fortified with a wall enclosing several acres once covered with buildings. Fifty miles east of Casa Grande, along the Gila, extensive ruins have been noted which led the observer to estimate that at some time 100,000 people had lived there.

One apparently intelligent hunter and prospector, wandering on the high Colorado plateau, described the ruins of a town which he thought had contained 20,000 houses. It is supposed that he was mistaken in the location and that he may have been unduly impressed in his surprise at finding in a desolate region evidences of a former large population, as no other report has been made of such an extensive series of ruins with the local circumstances he mentions. He must have exaggerated. Being a respectable person, and having no interest in the result, he could hardly have invented. But ruins are very numerous indeed, and it would be highly interesting to go over the report of a suitable person who should take the pains to find and record them all and have studied the evidences of cultivation given by each locality.

An isolated community, employing irrigation on a large scale in this extremely fertile soil and under a semi-tropical sun, would have very little trouble in making a few thousand acres furnish food for many tens of thousands of people.

They could have had little of the trade and interchange of modern nations, even of Mexico and Peru before the appearance of Europeans. Their separation from other habitable regions by the mountains and deserts and hostile savages that have so much impeded settlement there in the last three centuries decides that.

It has been suggested that they were a branch of the fugitive Mound Builders who fled here while the rest found their way to Mexico, to establish there the Toltec empire. We have seen, however, that the Mounds reveal an artistic tendency that might well have developed into the artistic creations found around Lake Tezcuco, in the Mexican valley, by Cortez; but, so far as has been reported, it has been found so wanting in the Arizona ruins as to furnish an almost decisive presumption against derivation from the skillful carvers in stone of the Mounds.

It has also been thought by many that these civilized builders and agriculturists of the desert were Aztecs, and that this was the original home of that race. It has been answered with much apparent force, that the style of these buildings, and the apparently national organization involved in towns so large and a population so compact, would not at all harmonize with what we know of the Aztecs, who were tribal and not national, or even federal, in their organization. That fierce, ambitious and restless race could not well have spent centuries of the quiet, tedious industry requisite to the production of these isolated ruins, and then have suddenly left them to absolute decay while strong enough to conquer the civilized Toltecs. They rather appear to have adopted civilization suddenly, to have engrafted it on their native wildness and fierceness, than to have attained it by development, as did the Toltecs. They were shrewd and intelligent enough to appreciate it and employ it as an engine of power and an instrument of their vaulting ambition; for they were a race of conquerors. Very few examples are found in history of races which have slowly and painfully emerged from primitive barbarity to a considerable degree of civilization, and then have turned conquerors from the original impulses of their own nature. It is fresh, wild, young blood, or that trained by and endowed with the intelligence of an adopted civilization that has rushed into the field of conquest.

It seems more likely that these civilized prehistoric Arizonians were more nearly contemporaries of the Mound Builders, an offshoot from the same original stock, which planted nationalities with a tendency to civilization from Chili to the Mississippi Valley, bringing maize from their southern birthplace with tobacco and other vegetables which—especially the first—became the base, or instrument, of their civilization. Squier has found, on the northern Pacific coast of South America, above Peru, similar ruins of races older than the Peruvians; and the civilized nations of Central America, of the time of Cortez, were surrounded by the ruins of vast and elaborate structures and once populous cities of which they possessed no history.

It seems more probable that the ancestors of the Aztecs may have exterminated the nation of the plateau, in conjunction with other fierce mountain tribes, and perhaps have acquired some hints and tendencies which rendered them more capable of appreciating Toltec culture when they came in contact with it. The Moquis, the Zunis, and the Pueblos of the eastern border of the plateau are thought to indicate a derivation from Aztec stock, or subjugation and partial civilization by the Aztecs in their more improved periods. All the Aztec legends which impressed and excited the early Spaniards appear to have had reference to New Mexico and the regions about the headwaters of the Gila and other southeastern branches of the Colorado. The "Seven cities of Cibola" were there, and New Mexico gave evidence of very ancient mining, as also, it is affirmed, of efforts to conceal the traces of it.

The Mountain Moquis, Zunis and Pueblos built their houses of stone and cultivated the soil. Their arts and habits seem to have been acquired from Mexico, not from Toltecs but Aztecs. They do not seem to have shared the aggressive character of the Aztecs, but to have been sufficiently resolved to beat off invaders. If they were ever under Aztec rule it had been cast off. They made a determined stand against the Spanish invasion and finally drove it out; and when the Rio Grande Valley became again a Mexican Province they still remained independent. Many ruins of a remarkable character are found clinging to the face of almost inaccessible clefts in the cañons of northwestern New Mexico and southwestern Colorado, implying peril of attack in far distant times and resolute defence.

It is as yet uncertain whether these modern tribes who have so long refused to recognize the rights of conquest, who have let others alone and determined to be let alone, can be shown to have the plain relationship of descent from the town builders and irrigators of the lower Gila and the western plateaus of Arizona. Thorough investigation will very likely make it clear. It seems to have been rather generally assumed that such was the case because both have been builders of fortress-like houses each of which seems constructed to contain a considerable community in itself. But the study has, as yet, been comparatively superficial and limited. Such facts as are now obtainable are not decisive, and the subject remains, for the present, in the form of theory. Of theories there are almost as many as writers. We have assigned above the reasons for that which seems the most consonant with the facts as far as now investigated.

Many wonderful events and series of histories have been enacted in prehistoric America which are being slowly drawn into the light and minutely investigated. A very fair degree of accuracy and detail is quite certain to be reached sooner or later. Human intelligence has a singular gift at using the many various instruments of nature so shrewdly as to successfully fling back a defiance and flank physical, and even mental, impossibilities. The inconceivable distance of the sun, for instance, can not be directly overcome, but a telescope has the effect of bringing it nearer, and the solar spectrum analyzes its constituents by its beams of light. With equal ingenuity man conquers time and lays bare the interesting secrets of the past, or predicts the future.

In Europe and Asia the caves, the lakes, the cairns, or mounds, and a thousand other receptacles of the relics of past human action, are gradually furnishing the details of the career of prehistoric man. Where these fail, comparative philology, or a comparison of languages, zoology, botany, chemistry, geology and many other branches of science lend assistance. It is surprising how much has been learned and carefully proved by the use of all these clews during the last forty years. As the American continent is less complex in its physical features than the Old World, so the past career of its human inhabitants will undoubtedly be found more simple and easier to follow when its general meaning and course is definitely ascertained. Arizona will probably take high rank as a field of archæological inquiry—perhaps next after Peru and Central America. It is likely to be well studied, too. Nowhere in the world are the processes of rock formation better illustrated; there is no better field for the broad generalizations of the geologist. The deep cuttings of the Grand Cañon of the Colorado, the barrenness and wide extent of plateaus of different elevation and material, render it a singularly inviting field of study for the man of science. Its traces of ancient human occupation will, therefore, the more certainly receive attention.

Certain changes of construction in the ruins of different localities in Central Arizona—those of the Gila River, and near it, from those found northward toward the Colorado River—seem to indicate greater need of defence as the advance northward was made. Some of the more southern ruins have the first or ground story completely closed and the walls of great strength and thickness, as in the Moqui dwellings of the present day and the ruins, generally, of the cañons of the more eastern branches of the Colorado. Yet this feature is not much remarked near the Gila. Blocks of mortar or concrete are there chiefly used for walls. In the middle region advancing north stone was often used between these, and further on the use of stone appeared to predominate until it became the exclusive material for the body of the walls and was sometimes squared, or cut into regular shape.

Also, as the higher regions were approached the more defensible localities were fortified. Sometimes the level top of a mountain was surrounded with a high, strong wall ten feet thick, the approach to the elevated fortress being sometimes made by an artificial causeway built solidly and with engineering skill. The ruins north become more scattered, massive and fortress-like. Cave dwellings, faced up in front to look like the natural rock, are found in the higher, fortified regions and are continued beyond the area of dwellings and forts to the neighborhood of the Grand Cañon. There are also indications that the last inhabitants of the dwellings and fortresses were slain or expelled by force and the dwellings left in a ruinous state. Three skeletons, with an olla or water jar near them, were found inside a building in one of these fortified places. They were covered with many feet of earth and stone, the ruins of the house, one of them having been evidently very tall—at least seven feet.

These facts have suggested to some the conclusion that a sudden and powerful attack was made from the south which destroyed the great towns and laid waste the wide-cultivated areas on and near the Gila. The remnant not slain retreated northward, fighting, and long maintained a vigorous defence from their fortresses in the mountainous regions, but finally were reduced to such extremity as to be obliged to conceal themselves in caves, where they built cisterns to hold a store of water and probably collected supplies of food to last them through seasons of danger. The evidences of destruction by fire of all or most that would burn, in many ruined houses, are frequent and seem to countenance such a supposition, or at least the termination of the occupation by violence. It seems probable that the ancestors of the Aztecs had their ancient seat farther south and assisted in destroying this industrious people—possibly lighting the torch of their own civilization at the blazing ruins they made; or they may have learned their first lessons in culture from the captives they reduced to slavery and carried away. Many a similar history has been recorded in the Old World.

It seems not unlikely that thousands of years were employed here in building up an original civilization, from a feeble South American germ, to such development as was possible with the cumbrous and imperfect instruments of the Stone Age. It was apparently isolated from other centers of progress, not sharing in the inter-communication that existed between Central America and Mexico, probably to the great advantage of both those countries. Like the Mound Builder communities, it was long undisturbed, and acquired much agricultural skill; then, threatened by bold and daring mountain tribes, they were led to precaution in building to avoid surprise, more care being requisite on the northern border; and finally, a strong combined attack of the tribes from the plateau of Mexico on the south was made suddenly and with a persistent determination before unknown to their experience, ending with the destruction of the larger towns. A long struggle toward the north is evident, and by a foe so determined that we may suppose it to have been of the vigorous Aztec stock. This ended also in ruin to house, fortress and cultivated field, the last feeble remnant hiding in caves while struggling with some local enemy like the modern Apaches, but finally perishing altogether, and carrying to the grave all memory of their once prosperous and industrious race.

It is possible that a body of fugitives passed eastward to the high watershed of the Rocky Mountains, built the cliff houses found by Major Powell, and transmitted their race to modern times through the semi-civilized communities still remaining there as a small remnant. Careful study and comparison may be able to decide; but what is now known seems to favor the probability that the Arizonians of the west, who irrigated with the care and skill of the ancient Egyptians, were a very old race; that the Pueblos, Moquis, and Zunis are comparatively young; and that their civilization was, in some way, derived from or connected with that of the comparatively modern Aztecs.

Arizona embraces a surface of about 72,000,000 acres, or 113,916 square miles. Of this it seems barely possible that one-fourth may be used for agriculture finally, although not quite 3,000,000 acres are, at present, so well supplied with water from streams and rain-fall as to be readily available for crops at moderate expense. Some of the old canals and reservoirs may be utilized hereafter; but the impression seems to have been made on the minds of the hasty explorers (so far as they have given public expression to it), that the rivers have worn down considerably below the levels that existed when these canals were made and used. If this proves to be true it probably indicates the long period that has passed since that ancient use. This impression is, possibly, more or less erroneous. One observer, noting a large canal of great length running many miles and then dividing into three branches, thought that the stream must have shrunk since the canal was built, its capacity seeming too large for the stream, which had, yet, many canals below. But this observation—as also many others—was made in haste, and in danger from the fierce Apaches.

Extensive surfaces, aggregating many millions of acres—

some have suggested fifteen or more—may be fertilized from wells. The soil is porous and readily receives and holds the rain-fall, and sometimes the contents of running streams. Wells of moderate depth, with wind mills, would suffice for the recovery of large tracts now useless, and artesian wells, drawing on lower and larger supplies, would fertilize large regions—how large can not now be estimated.

There is considerable rain-fall in the Territory, which is mostly derived from the Gulf of California. The variation in the elevation of the plateaus and the direction of the numerous mountain chains, however, makes a great difference in the average precipitation of different localities. The variation in rain-fall is said to be from half an inch to thirty-two inches; and extensive areas have an average annual rain-fall of twenty and twenty-four inches. This is not all in the winter, as in California. There are two rainy seasons in the year in Arizona, and, although they can rarely be depended on for all the moisture required by growing crops, they greatly relieve the burden of irrigation.

The plateau on which Prescott is situated, near the center of the Territory, is about 4,000 feet in elevation and receives annually twenty to twenty-seven inches of rain-fall. It is, still, a dry climate and evaporation is rapid, but it produces much most valuable pasturage, many thousand square miles of good timber on the mountains, and a general supply of firewood much more ample than is found in many parts of the Pacific Slope. With several million acres under cultivation in the lower regions the surface supply of water would probably increase, as in Utah. It is not unlikely that the extensive cultivation of the prehistoric inhabitants had the effect to increase the amount of moisture and precipitation and that the laying waste of their fields produced the evidences of increasing dryness that have been frquently commented on.

Coal is said to underlie an extensive area and to be very thick and valuable in places. It has been estimated by some that the precious metals will be found here in unrivaled richness of deposits and ease of mining and separation. The region of Prescott is proving extremely profitable for this enterprise, and the southern border, near Tucson, was found to yield a purity and quantity of metal seldom equaled in any part of the world by the missionaries of that region if their accounts are to be believed.

Other valuable metals, especially copper, are found in large quantity, and the Territory is declared to be peculiarly rich in rare animals and plants. There is, therefore, good reason why, at the beginning of 1880, so many large railroad enterprises were aiming for this region and proposing to make use of the best and smoothest route across the continent which it provides. By the close of the nineteenth century Arizona is sure to be far advanced in development and not the least prosperous and rich among the new states of the Pacific Slope. It will always show so much bare rock, and so much mesa, or elevated plain, that can not be prevented from parching up under the hot sun, as to more or less resemble a desert in many parts. Yet it has really extensive forests, a vast amount of pasture for stock where there is not water enough for agriculture, and many meadows charming the eye with herbage and flowers.

Cultivation to the extent now practicable and easy will make a great difference. Many of the most fertile plains, abounding with traces of the prehistoric cultivators, capable of rivaling in amount of choice productions any other region in the world, and of being made to look a very paradise, are now covered with unsightly plants when producing anything at all. The air is overheated by this bare and parched surface; it eagerly draws away all the surface moisture which rises to be wafted by the winds to the cool mountain tops or sides. Vegetation and trees produced by irrigation will cool the present hot air, yield to it more moisture, produce more favorable electric conditions and more frequent local showers. In short, all the impressive and charming changes made in the Great Salt Lake Valley and Southern California will, by and by, render Arizona one of the most attractive regions in the Republic.

CHAPTER IV.

THE GREAT DIVIDE—THE PRINCIPAL PLATEAU OF THE ROCKY MOUNTAINS.

The parts of California, Oregon and Washington now most favored and held to be the best lie beyond the western range of the Rocky Mountains. This second range is called the Sierra Nevada, in California, or along its southern course, and the Cascade Range, further north. The Pacific Coast region, west of this range, may be generally stated at 150,000 square miles. It has many and rare advantages. East of this range lie Arizona, Nevada, Utah, Idaho, and parts of California, Oregon and Washington. Arizona, Utah and Idaho cover much of the western or interior slope of the Great Divide, or Summit Range, of the Rocky Mountains—called by the Spaniards the "Sierra Madre," or Mother Range.

This is a very suggestive and not unsuitable name for such a massive elevation. It consists, in its great outlines, of a high plateau, which, on the whole, slopes gradually to the depression on the west and to the Mississippi Valley on the east. From the general plateau rise irregular lines of high peaks and elevated masses of rock and the height of land which turns the drainage toward the Atlantic or Pacific. East of this summit line are the headwaters of the Missouri, the western branches of the lower Mississippi and of the Rio Grande; west of it, down southwest and northwest into the great interior basins the numerous branches of the Colorado and Columbia flow and emerge from them to pour their waters into the Pacific.

This plateau is very extensive, much broken and diversified by great irregularities, and, viewed by localities, often seems to lose the character of a plateau altogether. Vast gorges, high ranges of mountains, or precipitous descents to lower ground alternate with deep basins, or parks, as they have been called, long valleys of great width—when estimated from the general elevation on either side—or rolling slopes which continue the descent through hundreds of miles in one direction so gradually as to render it insensible to the traveler. Yet these are but accidents and variations from a vast and grand unity. A general plateau remains as a base for innumerable mountain elevations, as the site of wide, often grassy, plains, of lakes and inclosed basins, and as the general elevated divide between Atlantic and Pacific drainage.

Since this general region has many peculiarities and important features of its own, is becoming the subject of great interest to the American people, the scene of various and most profitable activities, has, already, one organized state and will soon have several more, a chapter is here devoted to the consideration of it.

Arizona is on the western side of this Divide, and descends to the southwest in a succession of plateaus or mesas, which, if they do not, locally viewed, appear so, are yet so many vast graduated steps from the borders of Colorado and New Mexico to the mouth of the Gila. This last named river flows along a depression more gradual in its western descent than elsewhere, the cañon where it breaks through the barrier of the Mogollon Mountains from the high central plateau of New Mexico being near the western boundary of that Territory, and of moderate size and depth compared with the Grand Cañon of the Colorado.

Montana occupies a position in some respects similar as to its eastern section, yet marked by numerous strong contrasts. Western Montana sits astride of the great mountain vertebra of the continent, its plateau features are not as distinct, not as high, nor is the climate as arid. Its general appearance is, therefore, strikingly different although the fact is less in reality than it seems. The extensive surface-wearing of the Ice Floe, peculiar to the continent east of the Rocky Mountains, rounded many of its mountain chains, removed much of the ragged roughness and barrenness that is so conspicuous in Arizona, and its climate being less hot and drying, it is more extensively and profusely covered with grasses. At the same time the smoothing agencies of the Glacial Epoch gave its eastward descent more the character of a slope than is seen at the southwest in Arizona where no such general agencies operated.

Montana is stated to have, out of its 93,000,000 acres of surface, something more than one-sixth, or 16,000,000 acres, of agricultural land. It is possible that Arizona, with 20,000,000 less acres, may prove to have quite as much land that may finally be cultivated, although that point is not yet fully tested. Montana has 14,000,000 acres of timber—the most of it being of great value—and 38,000,000 acres of grazing land unsuitable for the plow. Arizona appears to be less fortunate in these respects now, although the cooling and moistening of the atmosphere by cultivation may somewhat equalize the present difference in the course of years.

Montana is traversed by the great river system of the Missouri, the Yellowstone being a kind of parallel to the Gila. There are many romantic cañons, though all are moderate in length and depth compared with the Grand Cañon of the Colorado. Its natural marvels, if less magnificent in compass, are more within the range of vision, and more fully appreciated because more easily measured by the senses. They do not so absolutely overpower the mind and beget the feeling that so much has escaped its comprehension that the effort at expression is useless. The Falls of the Yellowstone in the National Park are some 200 feet wide and nearly three times the height of Niagara. The smaller mass of water, falling the greater distance, makes a much stronger impression in proportion. Montana has natural wonders which produce vivid, and even ineffaceable, impressions. They do not stupefy the mind with magnitudes for which it can find no adequate measure.

Eastern Montana is a part of the Mississippi Valley, or of the "Plains;" the middle third and the western fifth or sixth of its area are more fully representative of the high plateau; between these last two is the Summit Range of peaks forming the separating watershed of the Missouri and the Columbia. Local ranges of elevation are even more numerous than in Arizona, but more often toned down into grassy or wooded swells, pleasant to see in massive outline and valuable ranges for stock. Delightful valleys and fertile "benches," or stair-like, yet modified slopes lie, usually, between. But it is not all of this subdued character. Bare rock and ragged outline are predominant features in many landscapes, especially along the streams where deep cuttings have been made and in the western third of the territory.

It is affirmed that Montana has as much timber as Michigan. It grows only on the heights, chiefly clothing the mountain sides. This, with the herbage over so much of the surface, prevents the intense heating of the lower regions of the air, and the rain-fall is considerable—from 12 to 20 inches annually, and often heavy falls of snow in the mountains. It is not sufficient for agriculture without irrigation, but water for that is usually abundant where it is desirable so to use it. The climate is deeply modified by vicinity to the Pacific. The warm winds from the Japan Current, the heated equatorial waters of that ocean, or both, pass quite over the mountains and, though so far north, give it the average yearly temperature of regions farther east far south of its latitude. A warm wind called the "Chinook"—because supposed to blow from the coasts where Indians bearing that appellation live—often blows in the midst of winter, suddenly removing the snow and giving the people a warm air bath in the highest degree pleasurable.

The soil has the large per cent of salts useful to vegetable growth common to volcanic regions, and generally present on the entire Pacific Slope. It is, therefore, of somewhat more than average quality. The native grasses are remarkably nutritious, retaining their valuable qualities after they are dried on the ground. They are so perfectly cured, nourishing and abundant that cattle seldom require supplies to be stored for the winter, grazing on them the year round. It is stated that 40,000 square miles of valley and bench lands lie below the height of 3,000 feet above the sea, in the whole Territory, and the more elevated western parts are tempered by the warm breath of the Pacific, so that this plateau is, on the whole, a most promising grain and fruit region. But for stock raising and dairying it has special adaptations of the most decided character.

Its mineral wealth has made it distinguished, even among El Dorados so famous as California, in its later years, Nevada and Colorado. It was stated in 1879 to have yielded $150,000,000 of precious metals in seventeen years from placer and quartz mines. This was obtained under serious difficulties from the great distance to be traversed even after leaving the head of navigation at Ft. Benton, itself more than a thousand miles by steamboat from the nearest connection with the railroad system of the country—a less distance than seventeen or eighteen hundred miles having been enjoyed but a few years. The central parts of the western section south of Ft. Benton, where mining was chiefly pursued, were about 500 miles from the Pacific railroad after that was built. With such distances and the great costs involved in traversing them and transporting material and supplies, the progress made was significant. Mining was largely confined to collecting the stores of free gold found in the loose earth of the gulches. The abundance of this argues great richness in the rocks from which they were derived, and when all the facilities of developing these hidden stores of wealth enjoyed by more accessible mining regions are obtained, Montana is expected to prove one of the richer mining localities of the high plateau.

Meanwhile other resources and adaptations were studied to provide for the support of the slowly gathering population, and it was found that stock raising and dairying were great specialties, and that there was, perhaps, as much good farming land as in the great and prosperous State of Ohio, with much more productive value on equal areas, and a climate even more agreeable. If the altitude and more northern latitude produced a lower thermometer for some parts of the year, and for special years, the greater dryness and purity of the air more than offset those points. It has, then, especial attractiveness to the emigrant from the east or from Europe. From the southern boundary of Montana the great plateau rises in average height, Wyoming being 2,500 feet higher, and Colorado more than 3,000. This is the mean height as estimated by official surveys under direction of the Government. Montana enjoys more fully than Wyoming the influence of warm Pacific winds, and this, with its comparatively moderate elevation above sea level, bestows on it a double advantage.

Here, in times reaching far back into the prehistoric ages, the Indian tribes lived and multiplied. Its nourishing grasses, curing so as to be available for grazing the year round, made it attractive also to the buffalo, or bison, the favorite food of the wild hunter. A healthy, invigorating climate and the strenuous exercise of the chase produced bold, hardy, war-like tribes. As they multiplied and fought the weaker were thrust out to wander further south and east into less favored regions. They followed the buffalo in his wanderings over the plains, and perhaps an acquired preference for this large game long prevented them from crossing the Mississippi and disturbing the Mound Builders; while their presence on the plains may have been the reason why that busy race did not ascend the Missouri to any great distance. The buffalo naturally ranged southward over the grassy plateau in Wyoming and Colorado, especially during the warmer months, and while there were no deep snows to make grazing impossible. This long delay of the mountain tribes in pushing eastward, far to the south over the higher plateau, and among the loftier mountains, gave the Mound Builders and the Arizona agricultural races the long, undisturbed period of gradual growth they evidently required and plainly had, and the increase of these warrior tribes who were, then as now, incapable of appreciating any approach to civilization became the growing danger which possibly led to fortifying in either case.

That danger may have sprung from the northeast in both cases. Vigorous tribes, or families afterwards becoming tribes, may have wandered across the Strait between the Great Lakes, or around Lake Superior, and have grown strong and fierce near Lakes Erie and Ontario, and, by a long series of attacks on the Ohio Mound Builders, led them to erect defensive works. It is also not improbable that the Arizona irrigators may have been long annoyed in the later generations of their occupation only in the north by wild tribes of the high plateau. In both cases it is probable that a combination of tribes rushed upon them at the last and ended their labors by a general catastrophe. By massacre, or expulsions, or both, Arizona was made desolate, and the eastern Mississippi Valley was cleared for the occupation of families of tribes originating on the plateau terminating the western plains.

These tribes had been very long separated from the great Dakota or Sioux family of tribes, or that race had expelled the original occupants of the pleasant Montana plateau. That family, when the historic period commenced in America, roamed the plains from the Arkansas River to the borders of British America and from the mountains to the Mississippi. One of their tribes was even settled in Wisconsin on the western shore of Lake Michigan. The race must have been resolute and bold in its early days to have spread so far, and may have driven out the many tribes that afterward occupied the broad domain of the vanished Mound Builders, or aided in expelling them. Great changes have followed tribal wars and wars of races since Europeans first visited the Atlantic coast. The termination of the two primitive civilizations referred to must have been such eras of great movement on the part of vigorous races.

The future of Montana must necessarily be a brilliant one. It is now on the threshold of a great and rapid development. It is not certain that the real resources of Arizona do not equal, or may not ultimately be found to excel, those of Montana; but the last lies in the zone in which has occurred the highest development of the activities of modern progress. The northern states of the American Union that have carried the enterprises and fame of the Republic to the highest point, where most vigor, comprehensiveness of plan, and power of execution have been displayed, lie east of it and have already begun to repeat in it the pioneer history of which the country is most proud. There will be no undesirable or embarrassing mixture of races; there are no bad traditions for them to unlearn there, and no great local peculiarities, difficult or costly to master, to retard progress when its great agent, the railroad, renders it accessible. Arizona lies in the latitude of the semi-tropical South, has a climate unfamiliar to the eastern settler, and its more considerable difficulties will be those the present generation will have to conquer. But the Southern Valley at the east of it is ready for a new era of activity and expansion; the great resources of the mines will attract or produce all that is needful for its growth, and it will soon furnish a large, rich and enterprising State to the Republic.

Yet, in 1880, neither the northeast nor the southwest slope of the principal Rocky Mountain Plateau held the places in public estimation that are to belong to them in the future.

Colorado sits astride the highest part of the Main Divide. Not far distant from the Pacific railway, the western border of the plains is terminated by the eastern brow of the high plateau, and the loftier ranges of peaks are about six hundred miles distant from the Missouri. No part of the plateau was more accessible from the east, and gold was found there at an early day, or long before the Civil War. A nucleus of settlement formed there at once. Before the railway crossed the plains growth was slow; but it took stronger and deeper root. The border of the plains at Denver is about 5,000 feet above the sea, the climate is pure and healthy, the soil fertile. The precious metals were not at first found in very large quantities free for the easy and simple processes of placer mining; the chemical combinations with other substances in which they were mingled in the rock when the ore was crushed were hard to break so completely as to extract the whole value of precious metal present. Time, machinery, and shrewd persistence set aside these difficulties in the end ; agriculture flourished, stock raising was found highly successful.

Colorado, by degrees, became a favorite resort of the tourist, the invalid and the man of business. Railroads early connected its chief city with the East, abundance of coal was found and a massive development was begun. This was the Center, where elevating forces had operated on a scale of strenuous and ample majesty beyond that displayed in other sections. It was readily supposed that mineral development would finally be found to correspond to the general proportions in other ways. This faith seems to have been realized by discoveries of precious metals of greater richness and extent in the higher regions of the plateau about the main watershed. Extraordinary results have been obtained at an elevation of 10,000 feet with much promise of even more important and widespread findings in the future.

The massive high plateau of the "Sierra Madre" here suddenly rises from the border of a slope 5,000 feet high, which is reached by an imperceptible grade, and stands overlooking a rolling plain reaching to the Mississippi and continued beyond to the broken country at the foot of the Alleghanies on the eastern side of the Great Valley, some 1,500 miles distant. As if taking observations of this vast basin and concluding to render it yet more ample, the main range turns abruptly northwest, giving a deep westward extension to the mountain rim of the Valley north of Colorado. About half of Wyoming and Montana lies westward of this sudden withdrawal of the dividing ridge. A pass gives access to the Utah basin—lying directly west of Colorado—near the northern boundary of this State and the higher level of the plateau gradually descends in Wyoming toward the north and the east. The River Platte finds its beginnings here and flows eastward, while many of the headwaters of the Missouri and its largest branch in Montana—the Yellowstone—rise in Wyoming and flow northward before turning eastward.

It is on this highest plateau in Colorado and its extensions south and northwest that the upper branches of the Colorado River rise, and these larger branches unite near the western line of the State and flow through the wonderful gorge of the Grand Cañon. New Mexico joins Colorado on the south. The plateau and divide of the eastern and western waters draws somewhat to the west, and has a general elevation considerably less. The Rio Grande rises on the heights of Southern Colorado and flows southward down a narrow valley a little east of the Grand Divide to find its way to the Gulf of Mexico; while the headwaters of the Arkansas, north and east of those of the Rio Grande, flow eastward through a deep cutting, or cañon, to the western plains, and, many hundred miles distant, join the Lower Mississippi.

Thus, Colorado has an eastern slope—the highest portion of the plains—which is much higher than the average elevation of Montana and of much of Arizona. It is, however, far enough south to counterbalance in part its greater elevation and gives much promise of the most valuable agricultural results. Many mountain valleys are highly fertile and the summit plateau has a series of basins surrounded by mountain elevations which, though so high, admit of cultivation. They are called Parks and were probably the basins of lakes or inland seas before the close of the long period of elevation. Lakes are indeed still found in the Parks and the soil is as fertile as the scenery is beautiful. A general covering of grasses adapts the plateau and the slopes to stock raising and forests are found on the mountain sides adequate to most of the needs of the state.

Thus the region containing the greatest average elevation has the general advantages of other sections of the main watershed and some that are peculiar to it. Its resources are vast beyond the present power of estimate. It has already nearly completed the general outline of its railroad system, the north, the south and the east being independently connected with the great commercial cities on the Missouri and the Mississippi, and many local roads are already built. Its inhabitants have bright and enthusiastic visions of the future greatness of the Centennial State and the outside world is very much inclined to agree with them. It is, however, hard to decide which region of the Pacific Slope and Mountain Plateau has the surest claim to the greatest destiny.

New Mexico has much the same advantages for stock raising as Colorado; it has valleys of extremest fertility and gives promise of a mining future of great proportions. If Montana has a most desirable position relative to the Northern Pacific and the Great Lakes, if Colorado and Wyoming have a smooth, easy and cheap connection by many railways with the most wealthy and progressive part of the country already developed, New Mexico has a still more southern sun and a ready passage through fertile Texas to the Gulf and the mouth of the Mississippi. Arizona has ready access to the

Gulf of California and convenient and cheap passage by sea through the future Panama Ship-Canal to the Atlantic, and is not distant from the ports of Southern California. Utah and Idaho have the disadvantage of lying in an interior basin, with a surface rude and dry; but they may, perhaps, secure larger degrees of climatic improvements than more open regions. They have undoubtedly a great agricultural and mining future and are not distant from the Pacific. Never, probably, since the world was made, has industry produced more striking changes in an unsightly desert than those to be seen in the Mormon settlements of Utah. Whatever may be their theological and social errors their industrial virtues are illustrated by all the landscapes which they have reclaimed from barrenness, made charming to the eye and yet more satisfactory to the agriculturist.

The Pacific Coast has its special advantages of position, of climate, and of productions. Observing all these and imagining the great future it is one day to reach, it is difficult not to agree with its inhabitants that no other region can be so desirable. Yet the interior contains a promise of future wealth in its basins, its valleys, its rocks seamed with gold and silver and abounding in economic metals, that equally fires the imagination when it attempts to portray the possibilities they are likely to render realities in time. The Great Divide, with its mines, its grassy plateaus and slopes, its fertile valleys, benches and plains melting insensibly into the Great Valley alive with vast and thrifty activities, is yet more striking when their boundless capacities for producing values for man are counted over.

Here is an embarrassment of riches and one knows not which to choose. so extensive is the promise everywhere. The prospector in Colorado suddenly finds extraordinary deposits in the rocks, and a city of 15,000 to 20,000 inhabitants gathers in a few months 10,000 feet above the sea. Continued study shows that countless thousands of apparently as rich or richer "claims" may be located in every direction, from which hundreds of millions will soon be realized. Stock raising proves a great success, and the volume of agricultural production continues to grow with, as yet, no visible limit. Surely *this* must be the Land of Promise.

But the new fame of Colorado has scarcely traveled around the globe when fresh examinations in New Mexico and Arizona engage the attention of the wondering world. The legends of the Aztecs, which so excited and disappointed the hopes of the Spanish conquerors of Mexico, had a real foundation, it seems, in these stupendous facts; only the gold and silver lay beneath the surface waiting for the arts and industries of the moderns to release them. The more Utah, Idaho and Montana are examined and their metallic veins tested, the larger becomes their promise. Even in California and Nevada the vast products of placer mining from 1848 to 1860 seem likely to become small by comparison with the washings of the vast quantities of ancient drift, of which the gold dust of the "foot-hills" and "gulches" of early California history were but the skirts and the overflow.

Beneath vast overflows of volcanic rock are found old river beds and immense quantities of drift, at the bottom of which, and near, or on, the "bed-rock" a new series of placers, or deposits of free gold, are found. It is more abundant—as reported by prospectors so far—than any similar deposits before found, for it appears to have been the immediate fountain of the former supply. It is more difficult to find, for the lava covering must be pierced, the underlying rock reached, and its covering of earth searched over wide underground areas. This area seems to be confined to the mountains, so far as now known, but only mechanical labor is required. No crushing of ore or chemical treatment is necessary to secure the gold.

So the discovery of previously unsuspected placers is announced in New Mexico, Arizona, Idaho and Montana. Thus

1880 opens a new mining era and invites capital and labor in unlimited quantity by fresh and still more brilliant promises of great reward. All enlargement of mining activity increases, at the same time and in proportion, the assurance of reward to agriculture conducted in the vicinity, for it secures the highest prices to the farmer as the farmer's vicinity does the most moderate cost of living to the miner. The railroads are now also in tolerable readiness to deliver the people and the facilities for working mines and land at, or near, the localities where they are wanted, and to transport the surplus products secured to the best markets at moderate rates. It is therefore scarcely possible for the industrious emigrant to locate amiss, whether it be on or about the high plateau of the Great Divide from Montana to New Mexico, in the interior basin from northern Idaho and Washington to southern Arizona, or on the Pacific coast from Puget Sound to San Diego in Southern California. Everywhere over these vast regions the new settler may find a choice of climates—from the burning heat of the lower basins to the temperate middle plateaus and valleys, or the cold and snowy heights among the lofty mountains. No region will fail to give him a special and ample reward for well directed industry, and the future will smile upon him with the promise peculiar to localities possessing great, accessible, and virgin resources.

CHAPTER V.

THE GREAT BASINS.

Viewed as a whole, the vast region west of the Main Divide, or summit uplift of the Rocky Mountains, is one slope since all its waters find their way into the Pacific Ocean, as those on the east do into the Atlantic. Estimated more in detail it consists of a series of elevations and depressions, that is, of three ranges of mountains, with a general north and south direction, between which run two valleys. Arizona, Utah, (with Nevada) and Idaho, with adjoining sections of California, Oregon, Washington and Montana, lie more or less in the great interior valley or connected series of basins. An axis, or watershed along northern Utah and Nevada turns the streams north or south. Western Utah itself, with Nevada, forms a separate basin from which the waters do not escape in the ordinary way. Evaporation is the only known avenue by which they pass out. Many of the streams sink in the desert sands, and probably are ultimately disposed of by evaporation, as is the water poured into the Great Salt and other Lakes.

Thus it has a river system of its own, and one of considerable magnitude; for the mountains about it are high, the snowfall on many of them is great, and the waters annually melted and sent into the basin from them all amount to a very great total. Any means that could arrest this vast evaporation or cause it to be precipitated again in the form of rain would recover the deserts from perpetual barrenness. Cultivation, tree planting and the change of electrical conditions produced by railways with their vast activities, rapid movement and powerful concussions of the atmosphere seem to supply these means. The Great Salt Lake was evidently, in former ages, at least 800 feet higher than now. Since the commencement of cultivation by the Mormons it is said to have risen fifteen feet.

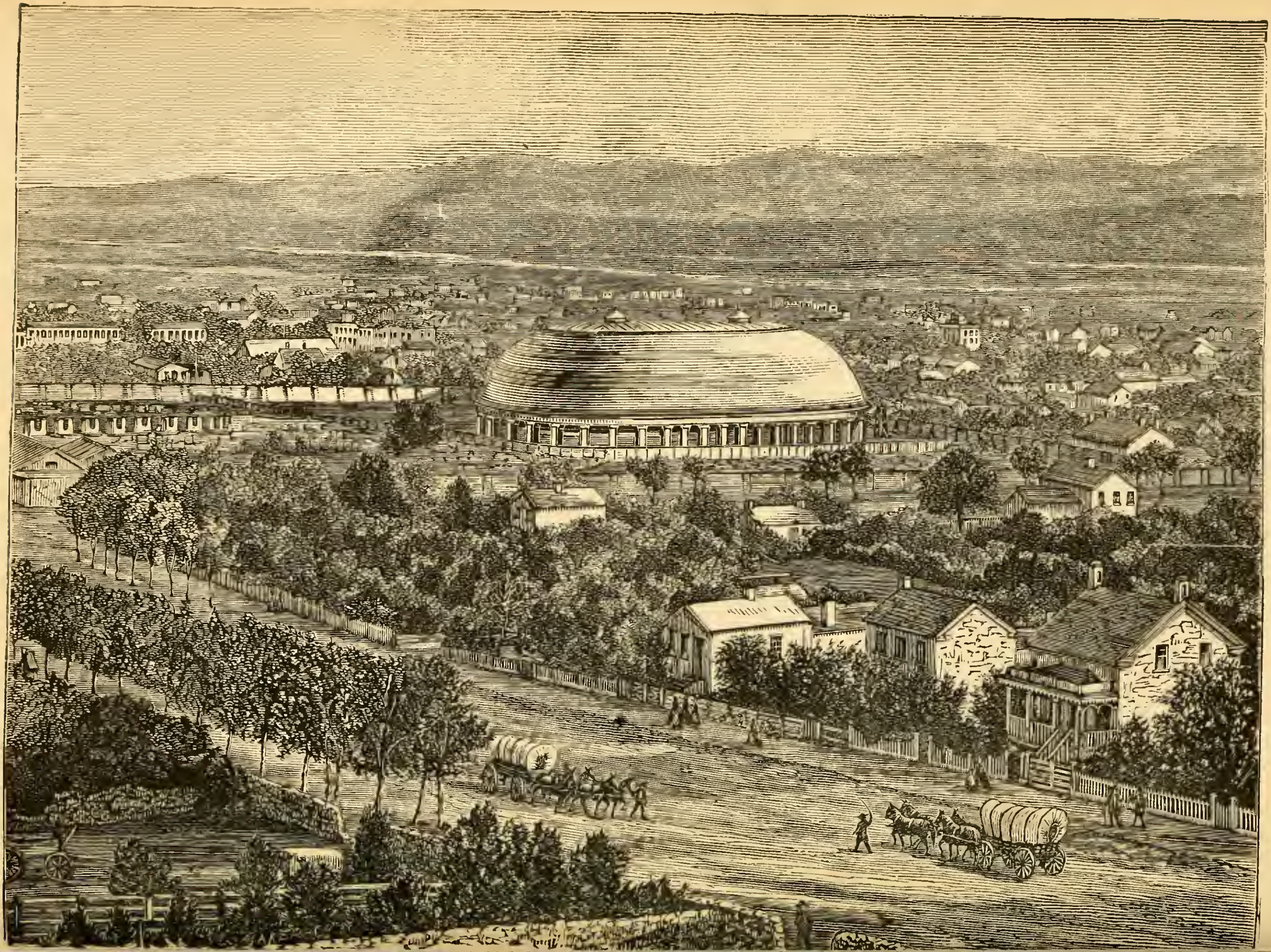
It is, apparently, the opening of the soil by agriculture, the cooling of the surface by irrigation, by the vegetables and trees under cultivation, and the favorable influence of plant life on the conditions of the atmosphere that have led to this smaller degree of waste of water. There is no large region in the country so confined as this, and none in which the effect of cultivation, would be so striking. Many other dry regions in the world have been observed to show similar results under cultivation. The plains west of the Missouri River have been carefully studied by competent observers for some twenty years, and a heavier rain-fall has been marked and permanent since settlement commenced. The problem here is a very interesting one. Should this increase of surface waters continue to develop in proportion to the spread of agricultural settlement the final result will be very great indeed.

Eastern Utah is drained by the Colorado River, and belongs to the basin of which Arizona is the southeastern part. North of Utah is a continuation of the same great interior depression which reaches its lowest point near the boundary between eastern Oregon and Washington. Here is another vast basin, although the mountains about it are not so high. The northern and southern branches of the Columbia drain the whole area, meeting to form a single stream at the lowest point of the basin, and then breaking through the formidable barrier of the Cascades on their way directly west to the Pacific.

The Sierra Nevada and Cascade Mountains may be considered as one range from Southern California to British America where they become the Coast Range. Westward of these is a series of valleys, and a general line of elevation runs still further west near the Pacific coast. This Coast Range is often broken through by streams with their valleys and sometimes disappears for a space to rise again further on. It is represented off the west coast of British Columbia by a chain of islands, and is, throughout, of less height than the Sierra Nevada and Cascade Ranges, while those are less elevated than the Main Divide, or summit ridge of the Rocky Mountains.

The southern part of the interior basin is exceedingly forbidding and desolate in general appearance. This includes Arizona, southeastern California, Nevada and Utah. Bare rugged rocks, wide desert areas—level or rolling—are but slightly relieved by belts of timber here and there on the mountain side, and occasional green oases or pleasant valleys. Deep gorges, or cañons, and sheer precipices of rock thousands of feet from top to bottom more often produce terror than admiration in a lonely traveler. Yet the deserts will probably be nearly all reclaimed and the mountains are everywhere rich in the most valuable metals. Thus, under a repulsive surface and the most formidable apparent obstacles to occupation and use lie concealed elements of a coming greatness as yet impossible to measure, but that will certainly be worthy of the adjective magnificent. The agriculture of the Mormon settlers and the revelations of the mines up to 1880 justify strong predictions as to the future.

The Columbia valley further north presents some features in marked contrast with those of Utah. The watershed which turns the most southern branches of Snake River—the southern branch of the Columbia—northward corresponds nearly with the decline in elevation of the Sierra Nevada as also that of the Main Ridge from Colorado to Montana. The ridge of the Sierra Nevada here becomes little more than a confused mass of highlands. Mt. Shasta may be considered the northern termination of the Sierra and that is thrown westward across the upper Sacramento valley, and, for a space of some hundreds of miles east and



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west, the distinction between mountain and continuous valley is almost lost. The extreme north of California is a sea of hills and, indeed, the same may be said of all the region in this latitude from the Snake River to the Pacific coast. Most of the interior may be called a plateau of lava, rude and rough and desolate beyond description.

Yet it has a summit, for the branches of the Snake flow inward and northward, and several streams in southwestern Oregon flow westward direct to the Pacific. Further north, however, the Sierra rises again and is continued in the general direction of the higher southern chain, the valleys, or basins, on either side become fully defined, and a sharp distinction in climatic peculiarities between the eastern and western valleys is maintained. For this middle region, where the Snake River collects its forces for an arduous descent through lava overflows and deep rocky gorges forming a series of cañons, is a high plateau, sprinkled over with ranges of hills and mountains, with isolated lakes and broad lava fields. Among these, for a considerable space above Mt. Shasta, the summit is not very distinguishable except by the turning of the streams to and from the Pacific.

This partial interruption of the high mountain ridge and its comparatively moderate elevation in the Cascades of Oregon and Washington makes a wide difference, as to climate and appearance, between the basin of the upper Columbia and that of Utah and the Colorado. It has been a region of great volcanic overflows in comparatively modern times and has, therefore, many bare and desolate lava fields and much ragged rock and wild scenery. But the mountains are generally clothed with timber, below the timber line are wide stretches of grassy slope, and in the valleys and lower levels is a soil of surpassing richness, often composed of deep vegetable mold. The warm winds, laden with more or less moisture from the Pacific, cross the comparatively low and more or less interrupted mountain barrier, and their influence is manifest through the whole upper Columbia basin and even across the main summit in Montana far down the long slope where the Missouri gathers its waters before turning the mighty mass southward.

Two hundred miles, or more, above Mt. Shasta the northward descent of the interior valley plateau becomes pronounced in the wide space between the Cascade Mountains and Snake River, and several considerable streams flow northward directly to the Columbia below the junction of its two great northern and southern tributaries. Far to the east of Shasta the waters of the Snake are gathered, in northern Nevada and Utah, southern Idaho and southeastern Oregon. The forty-second parallel of north latitude bounds California and Nevada on the north and Oregon and Idaho on the south. Two degrees further north the broad upper Columbia basin may be said to begin. It is, within the United States, not very far from a square whose sides are at least 500 miles long. The two great streams called the Lewis and the Clarke's Forks of the Columbia, from the names of the two first Government explorers, unite somewhat west and north of this geographical center, in southern Washington, and flow nearly west to their passage through the Cascade range. The northern branch, or Clarke's Fork, draining a large area in southeastern British Columbia, besides the upper part of the basin within the United States, is now called the Columbia as the southern, which forms the boundary between Oregon and Idaho for a long distance, is called the Snake.

The whole region has innumerable local mountain ranges, valleys, basins and plateaus. The northern part has several lakes of considerable size. Many of the valleys, especially near the center of the basin, are provided with a deep black mold that is incredibly fertile. "As fertile as the Nile" is supposed to express superlative capacity in the soil, which is probably true for the range of plants grown in the Nile valley now and for unknown centuries before the historic period;

but this soil has even stronger qualities. The whole basin is almost a single volcanic field. These valley bottoms of the Columbia have collected an abundance of the chemical compounds peculiar to volcanic regions to give the soil the utmost of vigor and durability and a capacity for a various vegetable growth.

The climate is, in the main, excellent, although the rain-fall is too light to safely dispense with irrigation and the far northern limit of the Columbia basin by a gradual rise to the high plateau in the center of British Columbia gives a free sweep to the cold mountain blasts of winter. Yet water for irrigation is abundant, there are so many mountains to wring the clouds dry, and it is little more than a hundred miles from the crest of the Cascades to the Pacific with its warm southwest winds and heated air currents from the "Gulf Stream," or Asiatic Ocean River, that strikes the coast at the north. This relation to the Pacific, with the general moderate elevation of the Cascade Range, modifies the climate and improves the productive capacity of the soil very much.

The "bench" lands—the slopes, or levels between the valleys and the mountain sides—make the finest grazing fields. Above them is usually more or less timber—sometimes considerable forests. These are, indeed, local, but fairly supply the ordinary wants of the settlers. It is another Montana west of the high ridge of the continent—not, so far as is now known, in all parts so rich in metals, but with more agricultural advantages. It is, as yet, but thinly settled for want, partly, of its merits being generally understood, and partly for the need of railroads to connect it with the outer world.

The basin of the upper Columbia has about 230,000 square miles within the United States, and that part of it lying further north in British Columbia is said to cover about 45,000 square miles. This would give the entire surface drained by the Upper Columbia as about 175,000,000 acres, of which a little less than 150,000,000 lie in the United States. The southern part of this is a high valley plateau—so high as to largely fill up the depression between the two ranges of mountains, the "Mother Mountains," or Great Divide on the east, and the combined Sierra Nevada and Cascades on the west. It is a very broken region, and is largely covered with vast lava overflows of comparatively modern date. The Yellowstone Park, on the eastern side of the main ridge of the Rocky Mountains, is in the same latitude, and still gives evidence of unquenched fires somewhere below in the rocks in its Geysers.

One-third of the United States part of this basin may be stricken off as largely unavailable for farming purposes, although there are many charming fertile valleys, uplands covered with nutritious grasses, and strips of mountain forest, which will ultimately contribute very largely to the support of its future mining population. In fact, portions of it in southeastern Idaho have already been settled and cultivated, and have been found even superior to Utah in some respects. Yet, as a whole, the region drained by the more southern waters of the Columbia is at present uninviting, difficult of access and sterile. The remaining 100,000,000 acres is an alternation of rude craggy mountains, of timber belts, of good grazing lands, and of incomparably fertile valleys and small basins. Idaho alone, has been said, on the authority of the surveying officers of the Government, to contain 16,000,000 acres of agricultural land, which is about a fifth more than all the lands of the rich and prosperous State of Ohio that are under actual cultivation.

There is unquestionably more tillable land in this upper Columbia basin belonging to the United States than in all the New England and Middle States together. The soil, as an average, is much more valuable for production, the climate is more agreeable, there is probably nearly as much woodland as now remains in those eastern regions, and a vast sum of grazing lands. If the rain-fall is limited there are plenty of streams for irrigation, and a certainty of results thereby secured that far more than compensates for the trouble and cost of "covering the land with water" by irrigating canals. But there is considerable rain-fall and cultivation is often carried on without irrigation with great success. It is also probable that the millions of agricultural homes that will soon be made all over the basin will materially improve the rain-fall and the climate generally. The greater mildness of the western slope of Montana from the influence of warm Pacific air has been proved in fruit raising, which is more abundantly successful west of the Main Ridge of the Rocky Mountains in this Territory than east of it.

Eastern Montana, away from the Main Ridge and its higher and nearer spurs, is more rounded and rolling—mountain chains sometimes showing only as immense swells. On the west, throughout the upper Columbia basin, there was no general ice-floe to smooth and tone down the rude and ragged outlines of the mountains, and it can not compete with eastern Montana in the ease and magnitude of its stock-growing business. Yet it has a vast sum of grazing lands. The upper Columbia farmers are already beginning to raise wheat by millions of bushels annually, and are quite sure of extreme prosperity in the near future.

They require comprehensive facilities of transportation in many competing lines. When several railroads connect them with Portland and Puget Sound, with California, with Utah and the Central Pacific, east by the Northern Pacific with Lake Superior and the general railroad system of the country, the problem will be completely solved. Individual industry co-operating with bountiful nature will do the rest.

CHAPTER VI.

THE PACIFIC COAST—FROM PUGET SOUND TO SAN DIEGO.

We have seen that a line of depression runs along the coast west of the Cascades and Sierra Nevadas, bounded on the water side by elevations of still less height, often broken through and sometimes almost or quite disappearing. They are not a very serious, yet a most useful and valuable, check to the entrance of Pacific winds and moisture to the series of depressions more or less strongly defined within.

At the northwestern boundary of Washington this series of valleys parallel with the coast terminates. The Cascades become, further north, the Coast Range, and the ridge which, further south, bids defiance to the waves and tempers the harsh damp winds of the Pacific, sinks still more, and is visible only in a series of islands—Vancouver and the Queen Charlotte group. Between the two for the space of several hundred miles the waves and storms rush in against the foothills and plains lying immediately west of the Cascades. Vancouver has a surface of about 16,000 square miles, and is separated from northern Washington by a deep and not very wide channel. At its southeast extremity spreads the Gulf of Georgia, considerably filled up with islands; a channel much embarrassed with islands separates it from the continent on the east, and Puget Sound—a deep inlet, not wide, but with many long arms—extends south from the Gulf of Georgia quite to the center of western Washington. The Columbia River, after passing through the Cascade Mountains, flows first west, then north and again west to the sea, 160 miles distant by its winding course, and forms the boundary between Washington and Oregon.

Western Washington is rather irregularly broken up into a variety of basins—some of the streams flowing direct to the ocean, some to Puget Sound, and others into the Columbia. Its surface is, therefore, varied, none being very high. The watershed elevations, the moderate valleys and meadow lands are numerous but not extensive. Western Oregon has a charming valley and long stream running north to the Columbia—the Willamette. This valley extends south considerably more than half-way toward the California line. South of this are several transverse valleys, the streams of which flow into the ocean—the most considerable being the Umpqua and Rogue River.

Almost all of this coast region is heavily wooded, the exceptions being mainly in the Willamette valley and some other bottom or low basin lands. The low and open character of Washington on the northwest permits the warm winds, heavily laden with moisture, to flow down the length of Oregon at certain seasons, from the warm East India current which crosses from the coast of Japan and strikes the North American coast near the peninsula of Alaska and below. This coast interior is, therefore, abundantly watered. The climate is mild, the soil has the immense fertility and stimulating salts supplied so freely in volcanic regions, and vegetable growth is very luxuriant. The trees are unusually tall, valuable for the clear lumber they produce, and of the most desirable species. The rains are mostly received in winter, and farming in summer has little check. The soil is light and sandy about Puget Sound having, apparently, been received, in part, from the ocean. Elsewhere it is the characteristic *debris* of the mountains, and, in the valleys and lower levels, rich vegetable mold has gathered.

Oregon and Washington west of the Cascades have nearly the extent of surface of New York, and almost all of it is available for farming when cleared of its forest growth. But its forests are invaluable. They will form, in the near future, one of the largest sources of gain found in this region. For the ordinary grains, vegetables and fruits of the temperate zone the valleys and lower slopes of western Oregon and Washington are not excelled in the United States, probably. The bays, inlets, and rivers are stocked with salmon and other fish to an extent unknown on any other coast of the country, greatly adding to the resources of the region. The catching and canning of salmon is already a large industry, and is likely to reach great proportions when the East becomes readily accessible by rail.

One of its chief advantages is that of position. Shipping from the Atlantic may pass half across the continent by the St. Lawrence and the Great Lakes to the western point of Lake Superior. The Northern Pacific railroad connects this point—when that road is completed—with the metropolis of Oregon, with the lower Columbia and Puget Sound, crossing the grassy plains and uplands of Montana and the fertile basin of the upper Columbia. An Asiatic and other Pacific commerce will presently rise in this far Northwest and develop industries vast and varied. A great highway of trans-continental trade and rapid intercourse will elevate this coast into a prominence as rare as comparative neglect of it, until the last quarter of the nineteenth century, has been complete. It will become one of the busiest and most rapidly wealth-producing regions of the singularly fortunate Republic. It is not the least of its advantages that the navigable waters and easy grades of the Great Valley approach so near.

The remainder of this coast within the United States is California, most prominent in the past and the present, and richest in the favorable features which enter into an estimate of the future. Almost immediately after the United States acquired possession of it the fame of its "foot-hills," broad plains, lofty mountains, "Big Trees," and magnificent Golden Gate, with its extended land-locked harbor, became world wide. Until recent years it seemed almost desirable

—if wishing could have made it so—that the vast region intervening between it and the Great Valley—with its lofty mountains, deep basins, alkali plains, and high, rude plateaus could be annihilated; but no such wish could now be felt. California was the Pacific Slope, the Eldorado, the golden portion of the United States. It was believed to be as eminent in climate and in capacity of agricultural production as in superiority of position and to be worth more than all the rest together.

Its merits, its great and varied possibilities developed sooner and more clearly than those of other regions of the Slope. The longer it was inhabited the more striking and massive did its various capacities appear. The diminishing result from "placer" mining was little regarded, so much more important did the gains of cultivation, stock raising and commerce become. But, as we have seen, every part of the mountain region developed some peculiar advantage—some one or more elements of superb promise, and, indeed, of rapid realization.

California needed to be a remarkable region, indeed, to maintain its early won pre-eminence among so many later, but very capable, rivals. Had they been appreciated and developed first, it may be that this pre-eminence would have been long deferred, but it must have been acknowledged at the last.

The high plateau that has been spoken of as nearly obliterating the interior trough which extends from the north Columbia to the mouth of the Colorado, also crosses northern California and southern Oregon, almost filling up the general depression that runs from the Gulf of Georgia to southern California, not far from the coast. It is this transverse elevation extending from Wyoming to the Pacific, that, within, separates the basin of Utah and Nevada from that of the upper Columbia, and, on the west, that of the great California valley from the basin of the lower Columbia. It is a plateau only when considered in its average elevation and full extent. Viewed in detail it is a confused mass of mountains, gorges, small basins and lava fields. Yet, the fact of the two depressions east and west of the Sierra Nevadas and their northern continuation, the Cascades, still remains, although quite indistinct, especially in southern Oregon.

Shasta, a most imposing mountain mass of over 14,000 feet in elevation and formerly a volcano, shows how the elevating force strayed from its proper line by confronting—standing in the middle as it were—of the California valley and forming its northern barrier. The Sacramento River rises in its neighborhood and flows southward, its valley constantly enlarging until it spreads out in great undulating plains and the river finally flanks the wide mountain region between its general basin and the Pacific coast and flows westward to the Golden Gate. Here, just before it reaches the sea level in San Francisco Bay, it is joined by the San Joaquin, which drains a still larger valley, though the valley extends south for a much longer distance.

Thus, the two valleys meet a little northward of the center of the vast basin and the waters united reach the ocean at San Francisco. Through this passage the waters of the ocean enter the valley enclosure and spread out in the long armed inlet of San Francisco Bay. It is merely a break in the Coast Range of mountains to give hospitable entertainment to the broad Pacific in return for its commercial services. Below the Golden Gate, as above, a wide area of mountain and valley extends hundreds of miles down the coast.

From Northern Washington to Southern California the distance of the mountain range forming the eastern wall of the various valleys, or basins, from the Pacific shore is nowhere far from one hundred miles. It is the greatest in middle California and least from the sea across Los Angeles plains. Somewhat less than two-thirds of the way down the length of California the Coast Range and the Sierra Nevadas throw out spurs that meet and close in the valley, forming its southern end. On the Pacific side of the valley, from the headwaters of the Sacramento to some distance below those of the San Joaquin, a wide space is mountainous. The elevations on this side are comparatively moderate—seldom more than 4,000 feet—while the eastern wall of the valley is about 6,000. Only one opening in the coast chain gives continuous access from the ocean to the valley, and that is at the Golden Gate.

Forests cover much of the mountain sides, especially of the Coast Range. Periodical rains visit the valley in the winter months, and it has singular advantages which will be dwelt on more at large in another chapter. The Sierra Nevadas on the east of the valley attain their greatest elevation opposite the Golden Gate and further south.

Northern California is varied in surface, partly a rough mountainous region, well watered and generally heavily wooded. Along the coast below San Francisco there are some delightful localities in a wide region similarly formed yet less rough and wild. It has some fine farming lands and also good ports on the coast, some charming valleys and plains, a warmer climate and less moisture than in the north, though much more than in the great valley of the San Joaquin in the interior. On the eastern side of the San Joaquin valley, on the lower slopes and at the foot of the Sierra Nevada are the famous forests of "Big Trees." The "Yosemite" is a romantic and very impressive side valley, or deep gorge, on the western side of the same range.

These trees are really monarchs of the forest, being found sometimes from twenty-five to thirty-five feet in diameter, and standing 300 feet high. The western coast has many of the same species not usually so immense in size. Yosemite is a valley eight miles long by two wide, with almost perpendicular walls three-fourths of a mile high. Most things belonging to this region—in fact to the whole Pacific Slope—

are characterized by vastness of proportions. Thus the California valley or basin—Central California it is often called—would about contain the whole State of Ohio, while space would still be left in the remainder of the State for three more divisions of the same size. Half of the population of the United States could find homes and support here.

Below the mountain barrier which closes the San Joaquin valley at the south is the Los Angeles plain seventy-five miles long and thirty wide. Although resembling a desert during the dry season, in its natural state, even more than the San Joaquin valley, it is capable of the most wonderful improvement, and will become, in time, to the eye, an earthly paradise. The rapidity of growth of vegetation when supplied with moisture in sufficient quantity, the prodigal yield of rare semi-tropical fruits and nuts, and its exposure to the Pacific on the west give to it and to the still more southern parts of the State some advantages which no other section of the United States possesses.

When all possible sources of irrigation are fully employed probably Southern California, and, it may be, the Colorado Desert east and southeast of it, will become the choicest region of the whole country for residence and small farming, or gardening and fruit raising. But at present it has only shown the remarkable character of its possibilities, a careful examination of which commonly fills the observer with rapture. The Colorado Desert seems to be, in its natural state, the utmost extreme of the dismal desolation of which even the Pacific Slope is capable, various and wonderful as are the capacities in that respect of some of its arctic solitudes, lava fields, rainless basins, high plateaus and ragged mountains. Some portions of it lie hundreds of feet beneath the level of the ocean. Dos Palmas, a station on the Southern Pacific railway, is 263 feet below the level of the Pacific. Travel must be continued sixty miles northwestward on this railroad before ground lying at the level of the sea is reached. Here there was once a considerable inland sea, the bottom of which is covered with salt, alkali deposits, and various pungent chemical compounds lying bare under a blazing tropical sun and cloudless sky. Violent winds, peculiar to this region, produce sand storms almost equal to the hot Simooms of African deserts, and bring the climax of discomfort and distress on the unhappy traveler.

This region is the counterpart, yet in some respects the contrast, in extremity of desolate repulsiveness of Arizona on the other side of the lower Colorado. The portion lying below sea level is said to have an extent of 1,600 square miles. It appears practicable to turn a part of the waters of the Colorado River into it and form a large lake. The evaporation from such an inland sea would materially improve the whole region, and is likely to be done at some future time. But this desert is a very extensive region consisting of high swells, rugged masses of rock elevation, broad plains and valleys as well as the dry bed of a comparatively modern inland sea. It is 300 miles across from Ft. Mojave to Los Angeles, and it is almost continuous northeastward toward Great Salt Lake across southeastern Nevada and southwestern Utah—a distance of many hundred miles. It is, with these associated areas, the largest and most complete desert in the United States. Yet a large part of it is as capable of being finally reclaimed as most of the now desolate fields of the Prehistoric Arizonians.

A wise use of such surface supplies of water as may be obtained from mountain streams and ordinary wells, supplemented by artesian wells, will probably produce great changes in the dry, hot climate. The streams would be larger, surface wells would furnish more abundant supplies. There would be rain-fall, probably, where now there is none, and certainly a heavier fall of winter snows on the mountains. The elements of vast fertility do not have to be created. They now exist among the hot pungent sands in great abundance.

When the increase of population on more immediately available lands shall require more space these latent resources will be improved, and means will be found to cause the desert to bloom in grateful abundance.

CHAPTER VII.

AGRICULTURE ON THE PACIFIC SLOPE.

People went to California first in pursuit of gold and a large part of them, up to 1860, were engaged in placer mining. Wheat was imported for food, it is said, as late as 1861. Yet much had already been done in the northern and central parts of the California valley to test the capacities of the soil and fitness of the climate for agricultural purposes. The census of 1850 reported 17,000 bushels of wheat; that of 1860, 5,900,000; and by 1870 there were produced 16,676,000 bushels. Between 1870 and 1880 the annual product perhaps averaged 22,000,000 bushels, sometimes rising above 30,000,000 and sometimes falling below 20,000,000. Irrigation was not much employed in raising this grain, and usually three years out of seven proved much too dry for fair results, especially in the lower Sacramento and most of the San Joaquin valleys. The rains are all in the winter season, the later growth and ripening period being entirely rainless. The quality of wheat grown under such conditions is unusually excellent.

This soil appeared to be particularly suited to this important grain, and the abundance of capital furnished by mining permitted farming on an immense scale where large profits were promised. Soon the central regions of the valley took on the appearance, in the growing season, of a vast sea of wheat. Sometimes many tens of thousands of acres were embraced in a single field, the property of one person. The later indications are, however, that undertakings so large will not, in the long run, be the most profitable. Smaller fields, more carefully cultivated and more or less irrigated, produce larger and more certain profits to labor and capital. It has also been found that other things may be cultivated with more profit than wheat at its best, so that huge monopolies of land are not likely to be permanent.

California covers a surface of 100,500,000 acres, or 157,000 square miles. Of this the waters—bays, lakes and rivers—cover 1,531,000 acres. The great central valley is formed by the Sierra Nevada Mountains on the east and the Coast Range on the west, which approach each other at the north and south and enclose a vast elongated basin. The opening of the Golden Gate through the Coast Range admits the waters of the Pacific which spread out within the basin into the very fine Bay of San Francisco. This bay receives the general drainage of the whole valley, is about fifty miles long and five wide, the Golden Gate being a deep passage to the ocean, one mile wide and four long. The valley is about 450 miles in extreme length, with an average width of sixty miles without including the foot-hills and lateral valleys. The Coast Mountains have much less elevation than the Sierra Nevada and permit the higher moisture-bearing clouds to make a vast annual winter deposit of snow on the latter range. In the spring and early summer the snow melts on all sides of the valley and sends down innumerable streams to the lower levels.

This supplies all the conditions of irrigation throughout the valley, and the time is fairly sure to come when a great part of this vast rolling plain will be utilized for agricultural purposes. Already a comprehensive plan has been devised. This contemplated a main canal, fed sufficiently by mountain streams, to be carried around the three sides of the San Joaquin valley, which should be tapped for irrigating the entire surface of the valley within and below its level unless otherwise supplied from local sources. By the help of this, or some other, system the whole region will ultimately become as blooming and boundlessly productive as a garden.

The climate of much of the basin is subtropical. Too far south and too well sheltered by high mountains to be much affected by the cool winds that temper most other regions in the same latitude, the growth of vegetation is not suspended in winter. Flowers bloom in the open-air every month in the year. When cultivation is conducted with due care and skill two or more crops may be obtained from the same soil during the year. It is said that Alfalfa, or Chilian clover, which furnishes rich food for almost all kinds of stock, may sometimes be cut from three to five times in the year, often yielding fifteen tons to the acre within the twelve months.

It is an exceptional climate and an exceptional soil. When all their adaptations are fully understood, when irrigation is employed in due measure and at suitable times, the very perfection of husbandry seems attainable in this sheltered and well furnished valley. It is far enough north for the best products of the temperate zone, while local peculiarities and the warm Pacific winds so shield it from extremes of cold that many valuable tropical plants may be cultivated with great success. Thus many vegetable products that elsewhere grow far apart may be found here side by side and furnish an unusual number of alternatives to the cultivator, as also an extent of possible pecuniary result which very few regions in the world can parallel. Oranges, lemons, olives, the most valuable and prolific nut trees, cotton, rice, and other rare products flourish in the neighborhood of the northern apple, pear, peach, plum, cherry, and the best grains, grasses and roots.

Northern California resembles Oregon, being higher in latitude and also in elevation above the sea; but a hundred miles above San Francisco semi-tropical conditions become noticeable. The lower Sacramento valley and much of the San Joaquin form the lowest parts of this great basin and have received the largest quantities of fine rich earth from the surrounding hills and mountains. It has the general character of a vast level, or gracefully undulating plain, of which 12,000,000 acres, at least, are capable of being made beyond measure productive of the most valuable, and many very rare, fruits and vegetables. It has but two seasons—the wet and dry. In its natural condition during, and for some months after, the wet season it was covered with verdure, flowers and fruits; but, as the hot season advanced and the moisture evaporated, most of the beauty disappeared and the vast plain lay bare, parched and dusty under the burning sun. The well-watered nooks, the uplands and some stretches of forest still preserved herbage for the stock of the mission priests and the Spanish rancheros; but the sheltered valley, especially in the dry years, was an inhospitable desert.

This is being gradually changed under cultivation, and especially by irrigation. Yet, scarcely five million acres in the whole State are under the plow, although somewhat more is enclosed, and most of the area serves the purposes of the stock raiser at some season of the year. In time, the large farms will be cut up into many smaller ones, all the arable land will be utilized, groves of nut trees, orchards, vineyards and constantly-growing crops will cover the plain; the climate will be improved, more or less, rapid evaporation will be largely prevented, and more moisture will enter into the production of green foliage, grasses, roots and succulent fruit; cooling summer showers may, perhaps, become frequent and beauty and comfort will be dispersed over the general surface of the most charming large valley in the world.

To reap all the possible advantages nature has here furnished to man, in their fullest measure, will require vast and diligent and wisely-applied labor for generations, perhaps, and immense outlays of capital, if the work be hurried; but there can be no doubt that magnificent results will be ultimately gained. At present, little more than enough has been done to show what future possibilities are. The vast wheat fields annually skim the surface soil of the broad valley plains, during the winter and spring, of the cream of their vegetable wealth, leaving them to lie bare in the hot sun of summer. Under this effort to gain the most comprehensive results with the least labor the production averages less to the acre as the surface salts entering into the growth of wheat are withdrawn. Gradually, irrigated gardens and orchards, fields of vegetables, grasses and grains increase; but they cover, as yet, an inconsiderable part of the surface. Less than half a million acres in all California were irrigated at the beginning of 1880; and less than seven hundred thousand people inhabited its broad surface. Japan has about 80,000 square miles of surface—half as much as California—from which 33,000,000 people are supported. All those parts of California which are fairly watered, or which can be irrigated, have, probably, both in the soil and climate, a much larger capacity for production than the Asiatic island empire.

It seems likely that, in the future, almost all the so-called "deserts" will be reclaimed and made to support a large population. A vast amount of moisture is lodged on the mountains in winter which melts and finds its way into the valleys to be evaporated in the hot air or swallowed by the loose *debris* of the mountains which covers the lower rocks. There will be less evaporation as cultivation covers larger areas and more moisture will be left on the surface for use. Artesian wells will bring up the subterranean supplies for irrigation; this source of moisture, added to such supplies as are now found in mountain streams and rivers, will render ever larger tracts, now too hot and dry for vegetation, reclaimable.

The parts of California south and southeast of the great valley that furnishes its largest body of available agricultural lands are less favored in the amount of moisture they receive. They form part of, or are closely connected with, the "Colorado Desert," so-called.

The great plain of Los Angeles is separated on the north from the California valley by the union of spurs from the Sierra Nevada and Coast Ranges. A southern continuation of the

Sierra forms its eastern boundary, though lower than the northern range, and various other elevations give it the general character of a basin open to the Pacific on the west, with easy passes toward the desert on the south and southeast. It receives much moisture from the Pacific, and has many streams from its mountain boundaries which furnish the conditions of irrigation to a considerable extent. It is decidedly more tropical in climate and productions than the San Joaquin valley. Irrigation has been tested in it with great success, and promises to render it almost a paradise.

The Pacific border west of the Coast Range, and the valleys and slopes within those mountains on the western side, have more abundant moisture in the summer season from ocean fog and mist, although it is the periodical southwest winds that bring rain-bearing clouds. North of San Francisco the Coast Range, for the most part, extends to the shore, with some breaks into valleys, bays and rivers. The mountains form a high, broken, heavily-wooded region far inland. Much valuable timber, some excellent farming land, and grassy uplands and high slopes for pasturage of stock are found here. The lower part of this region above San Francisco Bay has been found excellent for grape culture, and dairying is specially successful in some parts.

The coast south of the Golden Gate contains many counties where moderate farms are especially successful. Many of its nooks, valleys and slopes may be made an agricultural paradise with more ease and less outlay of labor or capital than the inner valley or the Los Angeles plain. Temporarily, the bane of this region, and of California generally, perhaps, is in the large estates, the habit of acquiring which was inherited by the Anglo-American immigrants from their Mexican predecessors. In the early days wide ranges were considered necessary for cattle, there was abundance of unoccupied land, and grants of "ranches" many square leagues in extent were easily obtained from the Mexican government. These Mexican grants were secured by Americans from the original grantees and, with the abundance of gold that was soon gathered in vast accumulations in the hands of the shrewd and enterprising, large purchases were made. In the coast regions, especially, these large ranches occupied lands that should have been many times subdivided, and it is seen to be more and more undesirable, as population increases, in the State generally.

This, however, is an evil that will remedy itself in time. The amazing productiveness of Alfalfa, or Chilian clover, and its great value for stock, will presently enable small farmers to raise stock by soiling, or cultivating their food, much more cheaply than the owners of a hundred thousand acres can, and so drive them to sell their lands. The law of agricultural progress in America does not, in the long run, favor large accumulations of land in single hands or under one management. Where this has occurred, under favor of exceptional or temporary circumstances, later tendencies have invariably discountenanced their retention. It is the personal diligence, the careful, minute attention of the owner of a moderate number of acres that has proved most successful in the end.

America has developed her magnificent resources with unexampled rapidity, chiefly because enterprise, being unembarrassed by artificial restrictions and the tenderness of the Government to favorites, was obliged to stand on its own merits. With exception of the Blacks up to the Civil War, the law did not contemplate the subjection of one class to serve the interests of another. If there were temporary monopolies it was because they had a degree of usefulness for the time being. When they ceased their service to the public or to their special region adversaries would spring up on every hand. They had no outside artificial protection; they must defend themselves by their own resources, and the greater their tax on the public—that is, the more complete their success—the more vigorous and numerous their enemies.

Thus the rise of territorial magnates such as afflicted Asia and Europe in the Old World and Spanish or French colonies in the New was not possible among Anglo-Americans. Capital invested in estates too large for the welfare of the region and people soon melts away, or is withdrawn under the stress of free competition by small farmers as the country fills up. Their persistent labor, energy and intelligence renders these investments unprofitable.

California is a strange and wonderful land to the new comer. It has remarkable features of surface, soil, climate, and situation, and these are of such a character as to secure it a future agricultural and commercial prosperity the compass of which it seems difficult to exaggerate. All over the Pacific Slope nature has conducted the most various chemical operations on a magnificent scale. A large number of these chemical processes springing from the activity of volcanic forces have served to enrich the valleys and plains. All the salts that enter into vegetable growth have been brewed in the mountains, lodged in the rocks, and washed down to the lowlands. The regions of sand, even, seem to produce almost as rich a vegetation, if only sufficiently watered, as the best soils elsewhere. San Francisco is located on a sand bank, and when wind-mills are employed to raise water in abundance the gardens display extraordinary fertility.

The irrigation of land here is equivalent to the use of fertilizers elsewhere. It seems that the materials required for vegetable growth exist in great abundance in the pulverized rock and volcanic ashes that have been carried to the lower levels. The chief wealth of the prairies of the Mississippi Valley is in the accumulations of vegetable loam formed by the annual decay of plants during innumerable centuries, which forms a vast storehouse of plant food; but the Pacific coast and valleys possess these stores in their original form, crystallized, but readily dissolved by water and taken up by vegetation when there is sufficient moisture. During the long ages of the past the vegetation that has sprung up in the wet season has in very large part been burned to powder in the hot sun and glowing air of the dry season, but the mineral constituents have re-crystallized and remain still for use when dissolved again by rain or irrigation.

Sometimes there are vast accumulations of salt, alkali, gypsum or other materials employed by the Vital Force in building up vegetable forms. This is where the waters collecting it lodged and evaporated, not being able to bear them further. The alkali deserts, when aired and washed by cultivation and a flow of water, become extremely fertile. The Colorado desert, in the southeastern part of California, has shown this extraordinary fertility when irrigated and cultivated. Nearly all the basins, valleys, and plateaus of the Rocky Mountain System seem equally fertile when they are not bare rock, and when water is obtainable in due quantities and at suitable times. Montana, Idaho, eastern Washington and Oregon, Utah, Nevada, Arizona and much of Colorado and New Mexico have, thus, an extraordinary capacity for agricultural production, not merely in spite of their general covering of mountain ranges and wealth of rocks, but even by virtue of the rocks themselves, when pulverized and their dust sufficiently moistened. The volcanic forces which have operated upon a scale so vast in geological times have not only furnished boundless material for mining enterprise but concentrated the requisites of food production in the rocks and lava which atmospheric decomposition and the storms and floods of countless thousands of years have reduced to powder on the plateaus, along the streams and slopes and in the valleys and basins.

The burning question, therefore, of the Pacific Slope is its water supply. There is, as yet, very much farming done in most of the sections without irrigation at all. Utah and Arizona are, for the most part, dependent for crops on moisture supplied in that way, although Arizona has, much of it, two rainy seasons in the year; the upper interior, as Idaho, Montana, etc., have employed it very little; and, of the 3,713,525 acres reported by the Surveyor General of California, in 1879, only 255,646 acres—a little more than one-fourteenth part—were irrigated, and yet 28,640,000 bushels of wheat were produced, besides about 18,000,000 bushels of other grain, nearly 8,000,000 gallons of wine, over 15,000,000 pounds of flax, about 800,000 tons of hay, 3,000,000 pounds of hops and 268,000 tons of potatoes. The fruit crop was valued at nearly four million dollars, and considerable surfaces were covered with vines and fruit trees not yet in bearing. The entire annual income of the State from the soil, stock and mines was about one hundred million dollars, of which the metallic product was about one-fifth.

The proportion of land cultivated is not very much more than one-fiftieth, while very near half is susceptible of use by irrigation. Comparatively small parts of Nevada, Utah and Arizona are capable of immediate agricultural use by such irrigation as is now possible from mountain streams; yet that part—not perhaps over a tenth or twelfth of the whole—is extremely prolific. A farm of twenty acres demands and rewards the labor bestowed on one hundred in the Great Valley, while the rocky surfaces are rich in metallic wealth, will employ a large population at no distant day, and supply a constantly-growing home market, enabling the producer himself to realize all the profit from the abundant proceeds of his few acres.

The cultivated areas are constantly increasing, although with slow moderation compared with the vast annual enlargement seen in the newer borders of the Mississippi Valley. Mining attracts large numbers, and the enterprises of commerce, manufactures, railroads and trade have gathered much more than half the population into the cities or to the mines. Nearly half the population of the State is to found in and immediately around San Francisco. Fortunes have been so often gained rapidly from these sources that comparatively few seek the slower but more certain road to competence and moderate wealth by soliciting the soil. This, however, was to be expected, and is but a temporary phase in the young life of California.

It is from the climatic effect of this increasing cultivation that the more abundant water supply of the future is to be largely drawn. A study of the rain-fall on the "plains," west of the Missouri River, during the first twenty years following the beginning of extensive settlement, showed a somewhat startling annual increase of precipitated moisture. A line marking the western limit of a certain measure of rain-fall constantly traveled westward, and rain guages at a permanent spot indicated continuous increase. The lamentable droughts of the early years of settlement gradually faded out of the memory of the community till apprehension of their return ceased to disturb the farmers.

A like experience, as to increase of water on the surface, has been noted in Utah, in the region of the most numerous Mormon settlements. The lands on which they located, built their capital city, and made their farms, were grim and desert-like, bearing substantially the same appearance as the most of the Utah basin and the Colorado desert at the present time. They had, in 1865, reclaimed about 150,000 acres by means of irrigation, and turned the desert into verdant groves, productive fields and unequalled gardens. A hundred thousand or more acres were added to the reclaimed desert in the next ten years. Wheat produced 50 and 60 bushels to the acre and other results were in proportion. Ten or twelve acres gave full occupation and income to a man through the year, for he was able to raise two crops, at least, from the same ground in the twelve months.

The use of water at the right times, and in the proportions which experience soon suggested, had the effect of fertilizing this volcanic soil, so well supplied with crystallized salts useful to vegetation. They opened the earth and kept it light and porous enough to absorb moisture readily, shielding it from the scorching sun and heat by the thick, cool verdure of growing plants; tree planting, which likewise cooled and protected the earth, attracted clouds and affected the electrical state of the atmosphere; probably, also, the effect of railroads on atmospheric conditions was important. A great change in the level of the Great Salt Lake has been produced by these means. That, at least, seems a fair conclusion from the facts observed here and elsewhere.

It is likely, therefore, that the careful cultivation of all lands where water for irrigation is attainable from streams, wells, or deep borings will greatly enlarge the water supply. Vast quantities of water fall in the mountains, as snow, which mostly melts and seeks the valleys and deserts to be evaporated in the air glowing with the heat of the sun and of the bare soil. This rises to a great height to be wafted by the winds to a cooler region where it may be again condensed. The progress of cultivation promises to arrest this waste of an element so invaluable to the agriculturist, to hold the water on the surface for use, and to considerably change the character of the climate. Lakes and streams will multiply in all this interior region, the air will be cooler, clouds will form, and occasional refreshing showers will fall in summer. The conditions of irrigation will thus constantly improve, its effect will be enhanced from slower evaporation, and all the surfaces covered with soft earth, or material for soil, may be utilized even where it is now impossible.

From Salt Lake City to the borders of British Columbia it is nearly a thousand miles, and about as much to the Gulf of California at the mouth of the Colorado River. An immense total of land is found in this distance of two thousand miles which may be reclaimed by the farmer and made to produce, beyond his former experience in the East, all the grains, fruits and vegetables useful to civilized man. An immense colonization awaits the progress of railroads. Activity in this direction began slowly to gather, in large plans and local undertakings, about 1870, soon after the trans-continental railroad joined the extreme East and the Center to the extreme West. The great depression of business from 1874 to 1879 made progress in actual building cautious and slow. After 1876 it gained yearly by some hundreds of miles; but, in a region with so many widely distant parts, a thousand miles of railway distributed in many different fractions seemed of small consequence. Yet these fractions assisted powerfully in gathering the nuclei of future States. A railroad slowly advanced from the Central Pacific in Utah toward Montana through a maze of mountains. Others advanced down Utah toward the Colorado River, and among the mountains of the Sierra in the State of Nevada.

Oregon commenced several lines of her future railroad system toward the south and east from the Columbia; Washington made beginnings from Puget Sound; the Northern Pacific pushed westward of the Missouri River toward the Yellowstone; Colorado pushed her network of roads among her mining regions, and the valley of the Rio Grande, in New Mexico, was joined to those of the Arkansas, the Missouri and Mississippi. California, meanwhile, was not forgetful of her right to leadership in great undertakings, and built many hundreds of miles of road north and south from San Francisco and Sacramento. The whole length of her magnificent valley was at length spanned by iron rails; the coast counties at the south of the Golden Gate were made accessible, the great Los Angeles plain was traversed, connecting it with San Francisco above and with the Colorado River and Arizona at Ft. Yuma. Thus the great lines of railway in California—its spinal cord and some collateral nerves—were fairly complete before 1880. It remained to finish the vast outline within the mountains and connect the East and the two sides of the Slope, six to eight hundred miles, by crossings, to marry the Colorado with the Rio Grande and the Southern Mississippi, the Columbia with the Northern Missouri, and then to furnish the various collateral roads required by the exigencies of localities favorable for mining and settlement. The work of massive development would then be fairly provided for.

It was a stupendous activity, and required a vast outlay, to make connections with the body of the country and so many various points within the vast uplift that lay between the Great Valley and the western ocean while business was embarrassed, enterprise comparatively dull and the country in what was said to be a "financial collapse." What, then, will it be when the "depression" has receded far into the vanishing past and the vast dawning mining enterprises have added another thousand million dollars to the floating capital of the world?

Mining interests are the great attraction and stimulus to this immense outlay in the construction of railroads through this rude mountain desert, as it seemed at first. California was the Land of Gold—the Eldorado more wonderful than the Mexico of Cortez or the Peru of Pizarro.

No other region has shown a like quantity of separated gold mingled with the sand of its streams and with the powdered rock at the foot of its mountains. It required almost no science or capital, only the perseverance of unskilled men to obtain it by unwearied labor. This surface supply was nearly exhausted in a few years, so diligent was the search by eager multitudes.

The amount of ready money it put into circulation, at a time when the railroad and telegraph and the multitudinous inventions of the century were waiting to serve modern civilization, made itself felt in the most remarkable way to the ends of the earth. English mines and factories and commerce greeted its appearance with a sudden vast enlargement. The lonely, peaceful prairies, forests and plains of the Great

Valley proclaimed its value by a sudden extension of railroad track tens of thousands of miles, by the scream of the engine and the roar of long trains filled with passengers and merchandise. The world of industry started into comprehensive action and quite changed the face of society and all the former conditions of life by its new-born skill and powerful agents.

The Civil War and the want of rapid and cheap communication between the East and the West gave California time to convalesce from the gold fever and measure the value of her other resources. Her soil and climate were found to be sources of wealth much more extensive and useful than even the gold of the foot-hills and Sierras and New York and London might find many things to envy in the position and prospective greatness of her commercial metropolis. The results of the placer mining dwindled to comparative insignificance and the skill and machinery required for quartz mining demanded much time and aid from railroads to become effective. Meantime the grain and fruit and stock, the manufactures and commerce of California increased her income far beyond that of the most prosperous mining years with a certainty of indefinite growth for perhaps all time to come. Certainly no one could foresee a necessary limit to this enlargement.

Gradually machinery and skilled laborers for the deeper and more difficult search for gold in the heart of the rocks were gathered. California did not prove to possess the richest deposits of the precious metals. Her income from this source varied from sixteen or seventeen to twenty-five millions a year, while Nevada, on the opposite side of the Sierra, sometimes produced almost twice as much from a single mine in a year. But California had the advantage of the first great discoveries of gold, of almost the best commercial position in the world—at least the world that was to be, on the vast Pacific—of a soil and climate concentrating as much of perfection, and as few serious or permanent drawbacks, as almost any region known; she had the commercial and trading metropolis of the West and vast capital. The gold of Nevada and Arizona benefitted her almost as much as if found in her own foot-hills. San Francisco was the financial and trading capital of the Pacific Slope and the great market of all the newer regions.

Quartz mining required an outlay of capital and was carried on with a difficulty that enabled men of great wealth and shrewd managers to get possession of the best and most profitable mines and to reap almost the whole of the golden harvest. Yet they built railroads, employed multitudes of men whose support gave an excellent local market to cultivators of the soil and greatly encouraged agricultural development. Their millions gathered from the mines, or from successful speculation in mining stocks, did not lie useless or unfruitful for others in the vaults of the banks. It was invested far and wide, wherever there was promise of rapid and successful growth, in all kinds of enterprises. These investments might give the greater part of the sudden profits of success to the financial kings; but, like other kings, their interests were identified with the prosperity of their subjects and dominions, so that their resources and power were the aid and stimulus of a wide circle. The millions of gold also became the security for, and gave value to, many more millions of currency and bonds which, received as money, furnished the instruments of a wide-reaching industrial activity.

If the gold and silver, or the larger amounts of paper to which they gave the value of money, flowed away eastward or to Europe they still stimulated general enterprise and supported vast plans that reacted advantageously, in many forms, on the welfare of the mining and coast regions west of the Great Valley.

Thus, individual or corporate success, even while monopolizing the products of mining on the Pacific Slope, became an indirect, but very great, advantage to its agricultural prosperity, helped to develop all interests and furnish the conditions of success to the tiller of its marvelous soil. The mass of the people in California and other parts of this Slope have been benefitted only, or chiefly, in this indirect way, from the first. The precious metals are said to cost more to obtain than they really yield in value. They are not absolute wealth, only the representatives of it—or the solid basis of that which more often passes for money—and the chief benefit of their increase is in furnishing the floating or free capital of the business world wherewith it inaugurates and carries to success enterprises of real and permanent value to mankind. The more the metals increase the larger the great and fruitful enterprises of business become.

Solid and enduring wealth consists in that which is permanently useful to man. Its soil, its climate, its position, are far more valuable to California than its gold. So the rich powder of the volcanic rocks in the basins, valleys and plateaus of the Rocky Mountain region holds its best values to the most of its people. The mines are valuable to them for the railroads they cause to be built, the markets they help to create and the abundance of free capital they provide. The mines are therefore of the greatest importance to the prosperity of all who settle among the mountains or along the coast.

It has become very evident, as the railroad system of this slope has developed, that an inconceivable mass of metallic wealth lies concealed in the volcanic ranges, awaiting the labors of the miner to free it from its long confinement. Nevada, Utah, Montana, Idaho, Wyoming, Colorado, New Mexico and Arizona, wherever thoroughly explored, have furnished hints of the most magnificent stores possible to be conceived. One vein has no sooner been exhausted in its more accessible parts than multitudes have proved still more inviting. The railroad system was pushed toward the completion of its great outline and more important branches more rapidly in 1879, rendering further mining operations easy in many fresh localities and the idea of the future treasures to be secured became more definite and tangible. Arizona and Colorado, particularly, made significant revelations of probable inexhaustible fountains of treasure. New Mexico and Utah adjoining afford, perhaps, equal promise. Idaho, western Montana and eastern Washington and Oregon are a little less accessible to the facilities of extended and thorough trial, although their first fruits, obtained under very great difficulties, count by scores and even hundreds of millions.

The whole surface of the West, therefore, contains immeasurable values. Where there is soil which may be irrigated a few acres are often as valuable to the possessor for what may be grown on them as two, three or four times as much elsewhere; on the plateaus where the soft covering of the rocks is thin, and water not abundant, the evaporation from the valleys is collected by the cooler air in sufficient quantities to support grasses on which innumerable flocks and herds may be nourished and fattened. Higher up on the mountain sides—too high for agriculture, but within reach of still more moisture from the clouds and melting snows—millions of acres of timber are found. Where none of these uses are possible, there are, for the most part, most valuable minerals to be obtained, and hundreds of thousands of miners and employes will, in due time, go there to be fed and furnish the market for the fortunate farmer, gardener and herdsman.

Where shall the intending emigrant to this Slope direct his attention? What region has the largest and surest promise? These are questions quite unanswerable when competitive merits are studied. If a local study is undertaken, such as necessarily occupies the inhabitants of any special section, each in turn will seem best, when merits and not disadvantages are considered. The special disadvantages of each are always found to be counterbalanced by some corresponding advantage that would be lost by removal. Arizona, southern California and the great Utah Basin are necessarily warm in summer in the lower parts, confined valleys or vast shadeless plains; but they have much "ozone"—penetrating stimulus and purity of air—that considerably balances the discomfort of the heat, while other parts of the year are charming.

The mountainous and northern regions have a delightful summer, abundance of oxygen, and severe winter cold. Gold or silver are almost everywhere, or a soil much more valuable to the owner—as a rule—than a mine. Rare and productive fruits and vegetables are a specialty of warmer regions, more valuable grains and extensive advantages for stock raising of the cooler. Where will immediate growth and the best markets be found? Nearest the richest mine where soil and water are found in proper measure. That may be successively transferred to a thousand points over a territory of a million square miles in a few years. San Francisco is the incontestible emporium now; Portland considers herself fairly in the way of becoming a rival by and by, and the inhabitants of Washington look for the possession of the great commercial metropolis somewhere on Puget Sound, in time. Meanwhile large cities—capital, local, and railroad centers—are multiplying in the mountains and growing in the basins and many of the valleys all over the interior. It is difficult to make a specific choice but for specific reasons, and he who carries industry, determination and intelligence in his own character, mind and person can scarcely locate amiss. It is a truly wonderful region to lie so near the vast alluvial Basin of the Mississippi.

CHAPTER VIII.

SETTLEMENT OF THE PACIFIC COAST—THE VIGOROUS CHARACTER OF THE PEOPLE.

Rumors of states and cities and immense collections of treasure reached Cortez soon after he had completed the conquest of the Aztecs of the Mexican plateau, and he sent expedition after expedition into the mysterious wilds within or near the present Territories of the United States. All these failed more or less completely, and Cortez himself did little better, though he confined himself to explorations about the Gulf of California. The pearl fisheries on its coasts proved to be of value and made some fortunes; yet millions were spent by Cortez and subsequent vice-royal rulers of New Spain without much serious or permanent result, except some knowledge of the geography of these regions and of the coast lines of Upper and Lower California. It was more than seventy-five years after the conquest of Mexico when the Jesuits succeeded in establishing a mission in Lower California, or about the year 1700. Gradually these multiplied and spread into Upper California, and in the course of a century a few thousand Mexicans and half-civilized Indians improved the natural pasturage of California by establishing cattle ranches, so that by the time that country passed into the hands of the Anglo-Americans, in 1846, 20,000 Mexican citizens were spread over the California basin and along the coast.

The mild and unenterprising character of the Indians rendered them fairly suitable, after training by the missionaries, to supply any lack of Mexican and half-breed servants required by a rude society in raising cattle. The civilized population had none of the ambition and energy of the Anglo-Americans of the Mississippi Valley, nor of the unquenchable thirst for gold of the early Spanish immigrants to the New World. They did not suspect the vast deposits of precious metals along the streams of the foot-hills nor the rich veins penetrating the rocks of the mountains. They were themselves even more averse to continuous labor than the Indians; but had they known how rich were the mines they would probably have obliged the Indians to work them, as in Mexico and Peru. The Spanish-American was enfeebled by the wealth wrested in such quantities from the organized communities found by the first adventurers. Obliging the native to toil for him he retained only sufficient vigor to keep the Indian in subjection, and manifested little progressiveness.

Mexico became nominally a republic about 1822, yet self-government was almost unknown and incomprehensible to much the greater mass of the people. Little difference except a more frequent change of rulers was apparent in the distant and slightly organized dependency of California. The central authority now at Mexico was a military dictator who knew comparatively little check to his personal control, and had only to fear a sudden "Pronunciamento" of another ambitious soldier as soon as there was serious discontent with the existing government, or a rival could collect partisans around him. It was a kind of organized anarchy, and the expulsion of the Spaniards often appeared a misfortune; yet the field was open to the aspiring, injustice might produce avengers, ever larger masses of the people began to think and aspire for themselves and the State. If this was in a very imperfect and often injurious manner, they would gradually learn wisdom from disaster. In short, an element of progress was introduced from which, in time, everything was to be hoped.

California was little benefitted by this change, yet it was not much injured. It was too poor and too distant from the center to be much of a prize, and when the Mexican War occurred, twenty-five years after Spain had withdrawn her viceroys and governors, the Spanish-Americans of California were quietly plodding the somewhat dull and eventless round of their lives. There was little to stimulate effort. There was not much commerce; they had almost nothing to exchange for foreign commodities but the hides of their cattle; there had never been any such serious danger from Indian hostility in California as had existed in the Mississippi Valley, on the Atlantic Slope, and from the Apaches and other tribes further east within Mexican territory. This spur to energy and element of discipline was wanting. Yet, that there were elements of great distinction and power in the Spanish people history has many times proved. In the later periods of Roman rule it was sometimes said that Spaniards were more Roman than the Romans themselves; and in the beginning of modern times the European people of the Spanish Peninsula had a constitutional government the most liberal of any race then living. Their conquest of the Moors and of the New World, and their supremacy in Europe in the sixteenth century testify to their inherent vigor and capacity.

These great qualities mostly slumbered on the Pacific Coast for want of stimulus; yet they were discernible in their self-control and their great success in managing their dependents and the Indians. Each Mission Station and Mexican Ranchero was a little lordship, or principality. The rule was very patriarchal but very complete. The Indians were far more docile, useful, and, externally at least, civilized and christianized than under later Anglo-American rule. Spanish life in America is a somewhat contradictory, curious and interesting study. It has, possibly, started the more southern Indian races on a new and higher line of improvement that will bear good fruit in the future.

Arizona, the great Utah Basin, and the part of the southern mountain plateau now within the United States, were nearly free from European presence. They were absolutely so except in the Rio Grande valley where the Spanish, after some contests and trials, had established their ascendency over the native races. All the rest was roamed over by the wildest and fiercest of Indian tribes and was, apparently, too much of a desert to be worth their conquest even had that been possible so remote from the City of Mexico.

Traces of occupation by a people civilized enough to build great aqueducts for the purposes of agriculture, the ruins of many extensive buildings, together with certain Aztec traditional tales, made of it a land of mystery and romance. Tales of populous cities, of vast wealth, of civilized government, floated about in the Mexican air. The wealth is now being realized by tens of millions of dollars annually; but the ancient people have vanished. The remains of a comfortable and considerably civilized life are very striking and significant although quite as meager as those of the Mound Builders in the Mississippi Valley. Such as do remain, however, being embodied in stone, are unequivocal in their testimony to the existence of an ancient well-organized community there.

Neither the coast nor the interior of Oregon and Washington furnished any traces of former civilization. Lewis and Clarke explored the region for the United States Government immediately after the "Louisiana Purchase" from the French of their claims to all their territory west of the Mississippi River. If this mountain region was not distinctly included in that purchase it rather naturally went with it, and an American sea captain was the first to discover and to enter the mouth of the Columbia River, in 1792. The British American Fur Trading Company, however, first located a trading fort at Walla Walla within the mountains, and, during the war of 1812-15, a British vessel took possession of Astoria, an American fur trading post at the mouth of the Columbia.

The English and American Governments could not agree as to which had the better claims to the Oregon coast and the inland regions drained by the Columbia and its branches till nearly the middle of the century, and there was much warlike excitement in the United States over the English claims about 1840. A peaceful treaty, however, decided in favor of the United States, and established the International Boundary on the 49th parallel, where it now remains. Toward the same period—1839–40—American mission stations began to spring up and American settlements commenced on the Willamette in western Oregon. At the outbreak of the Mexican War the settlers numbered several thousands. California was then taken possession of by Fremont and Commodore Stockton, and remained in American hands, by treaty, at the close of that war.

The discovery of gold in a free State along the streams and among the foot-hills at the western base of the Sierra Nevada Mountains of California soon after American occupation concentrated the coast settlement chiefly in the California valley. Yet, after a few years it was found that, for most people, farming was more profitable than mining, and population gathered in Oregon. The settlements, however, mostly remained west of the Cascade Mountains. Oregon and Washington in this region differ from all other parts of the Pacific Slope, and, indeed, from all other parts of the continent. They are abundantly watered, have a mild and equable climate, an extremely fertile soil, a heavy and valuable growth of timber, access from the interiors to the open sea by water routes, and an exceptionally fine commercial position which will be of incalculable importance and value in the future. The region here north and south of the Columbia furnishes a surface larger than the whole State of Ohio with greater value and durability of soil, so far as may now be judged, with far more important uses and values in its timber, a better climate and more favorable rain-fall and extensive deposits of coal.

A new supply of precious metals about 1850 was the great necessity for the enlargement of business activity and enterprise made possible by the use of steam on land and water. All the skill, inventions, experiences and discipline of the past had prepared the more civilized nations—and especially the Anglo-Saxon races—for this enlargement. The gold of California and Australia, and the silver of Nevada, Arizona and Colorado would not corrupt and debase these active and thrifty nations in the nineteenth century as the treasures of Mexico and Peru did the Spaniards of the sixteenth. Those Spaniards gained it by violence to increase their pleasures; the later industrial races by honest toil, to use as an instrument of lawful activity and most profitable enterprise. We have seen its relation to the spread of railways in the Great Valley and the immense advantage of these to the growth and development of that admirable region. It was employed for similar useful purposes by England and her colonies, by France, Germany and other civilized nations, to develop their internal resources and increase their facilities for exchange with every region of the earth.

Thus were California and the mining regions of the Pacific Slope intimately connected with the progress of the world in civilization and comfort. For the first time in the history of the world great treasures, suddenly acquired, did not blight the energies and degrade the lives of the people into whose hands they passed. In this case it was, at most, only individuals, comparatively few in number, that were demoralized. Nothing more clearly shows the real and thorough progress achieved by modern civilization, and the subsequent history of the Pacific States and Territories is the greatest possible encomium on Anglo-American mental soundness and moral vigor.

The rich discoveries of gold became immediately known to the civilized world and eager adventurers rushed from all directions to the foot-hills of the California basin. Thousands crossed the six hundred miles of plain, the thousand miles of mountain barrier and burning desert that lay between the States of the Valley and the golden sands at the western foot of the Sierra Nevada, with toils and sufferings difficult to conceive by those who have not experienced them; and tens of thousands reached the coast by a long and perilous passage around Cape Horn, or by the difficult pathway through the mud and malaria of the Isthmus of Panama. It was a wonderful gathering of the adventurous, the enterprising, and the desperate, collected in a comparative desert thousands of miles, by the shortest routes, from the comforts and conveniences and legal organizations of civilized life, in a land whose condition and climate were almost unknown, where gold was more abundant than water, and sometimes could not purchase the simplest necessities of life.

It must have been as severe a test of human virtue as men could well be subjected to—a social and moral chaos with every temptation to depravity, and every embarrassment to the introduction of the usual methods of order and law. In its result it was a final and triumphant proof of Anglo-American civilization. Inevitably, for a time, and to a great extent, lawless violence ruled, until the thrifty and wise could distinguish each other, concert fitting plans, and concentrate strength enough to carry them into execution. They were mostly strangers to each other, and had all the power of violent passion—sustained by lust of gold—to combat. But the American was accustomed to self-government, to rapid conception and prompt execution. Extreme disorder was soon obliged to conceal its darker deeds, and when these proved too strong for ordinary justice an extraordinary tribunal was constituted, and swift retribution fell on the criminal. The end accomplished, ordinary laws and remedies resumed their sway.

Anglo-Americans demonstrated their capacity for ruling extraordinary situations under these singular difficulties more rapidly, and even more triumphantly, than in the Valley. In two years a population of a hundred thousand had collected, besides the multitudes which had come and gone. All the institutions and aids of a highly-organized society were soon collected under the stimulus of gold. Towns and cities rose as if by magic; the resources of the country were studied and developed. Within two years from the first great rush of gold seekers all the preliminary phases of organization ran their course, reconstituted social and civil life, and California was admitted into the Union of States by Congress, September 7, 1850.

With the establishment of the first State on the Pacific coast a new order of development commenced, a new class of capacities and adaptations of American character and habits began to take form. It was the Anglo-American as developed further east by the experience and successes of nearly two hundred and fifty years, who was acquainted with difficulty and accustomed to conquer it; who knew how to build up a political society, shield it from danger and keep it progressive; who was so ingenious and successful in business as to make the most of the resources within his reach, who was now settled in a gold field of unexampled richness. Capital could be immediately obtained in vast quantities, the only limit being in the degree of enterprise and the amount of labor and skill expended. For the employment of this ready cash capital lying everywhere among the mountains and foot-hills he had a great and thriving country across the mountains at the east, a free range of the vast Pacific, with access across it to China, Japan and all the islands and old and rich nations of eastern Asia, with such a direct trade with Europe and its colonies as should be found profitable.

It was an opportunity of grand proportions with a bewildering variety of great resources, and channels for them to flow in, such as had never before been granted to man. But the American was here set down in a seeming desert many thousand miles from the great centers of industry and commerce. He must organize and develop from the foundation on a grander scale at the start than had ever before been known. This required time and gave a new and higher degree of discipline. Meanwhile the gold flowed away from the Pacific coast to all civilized, and many but partly civilized countries. It furnished the means for a more rapid and voluminous development of the various great enterprises and industries of modern times. The countries that profited by the golden stream most were those which were best prepared to use it—England, America and France—but especially the Republic of the Atlantic Slope and of the Great Valley. The uses to which the capital was there put increased it a hundred fold, for it was spent, not in childish luxury and temporary splendor, but in developing the real wealth of which gold was only the representative. This development reacted on the further and most rapid progress of the Pacific Slope in many ways and with great power. It was as if California had loaned all her ready-money in the East and in Europe at an enormous interest which was returned, not directly in money, but, what was far better, in various appliances and aids to real progress and permanent wealth.

But much of the gold of California was invested within her own boundaries, with the effect of doubling, trebling or quadrupling her average production of real wealth. The climate and soil were found to be of rare excellence where well understood and properly utilized, and in a few years she began to export her grains and fruit on a large scale. Stock had always been a specialty of the few Mexicans resident there, and was now vastly improved in quality and increased in quantity. The production of the fisheries of the coast and the lower courses of the streams, of the mines of more common metals and salt, of manufactories, as soon as they could be established in California and Oregon, and of the magnificent forests of Washington, soon amounted to an enormous total with a future of almost unlimited expansion for each.

All these had but the smallest beginning when the civil war broke out and diverted the energies and resources of the East from producing to destroying—from enlargement westward to self-preservation eastward. California and the whole Pacific Slope naturally suffered from their close relations, political, commercial, and industrial, with the contending sections; but it was distant from the scene of actual conflict in which it took part on the Federal side chiefly by its political organization and by its regiments of soldiery. The western coast was clear sighted, and had been from the first, forming a free State and rejecting forced labor when it applied for admission into the Union, and steadily maintaining its loyalty to the best economic as well as political principles. It consolidated its growth and steadily pushed forward, though slowly, during and after the war; for it was distant from the world's centers of activity and had great barriers to break down that were felt to be more and more annoying hindrances as progress gathered in volume.

Thus, there was a degree of isolation here for twenty-five years—as at first on the Atlantic for English colonists and afterwards in the Valley for Anglo-American pioneers—although here it was modified by the Pacific highway to all parts of the world and a rapid steamship communication and commerce, though the shortest distance by sea to the great eastern markets was 5,000 miles. It was summarily ended in 1869 by the completion of the railroad across the continent; but the kind and degree of isolation had stimulated the intelligence and enterprise of the better and ruling class of the people, who were true Anglo-Americans in aim and spirit—although multitudes were foreigners by birth and education. Americans from the East predominated in numbers and still more in influence; for most intelligent people of other nationalities—and it was more especially such who found their way to California in the early days and remained—readily fall into American ways, throughout the country, and take an ample part in its enterprises. With abundant capital and large opportunities the natural difficulties to be surmounted were great enough to call out all their genius and energy. The disciplining power was peculiarly great and summarily effective.

Long experience of difficulties which were to be overcome by private combination and energy had given Americans a special education and great facility of adaptation. When called on to engage in the new industry of mining on a great scale, to reclaim a region which was an apparent desert one half the year—and often appearing such permanently—to inaugurate a system of transportation equal to the wants of a vast and distant region suddenly deluged with inhabitants and containing boundless resources waiting to be developed, they were equal to the task.

A few years had provided the machinery required to crush the rocks and reduce the ores of the richest mineral veins in the world; they had developed agriculture in the California valleys and basins, so as, with the products of Oregon, to more than supply the needs of their population and commence exportation; and they had, with the most remarkable persistence and fertility of resource, contrived to build a railroad from tide-water on the Pacific over the high and precipitous Sierra Nevada and across the rainless desolation of the Utah basin. It was there met by another which had crossed the sea of mountains that separates the interior from the plains, and over those—then an almost uninhabited, treeless space—from the Missouri River, where it connected with the railway system of the rest of the country.

This Pacific Railway, as a whole, was indeed, a national enterprise in many respects, for it was authorized by the Federal Government and aided by public funds to the extent of over sixty-four million dollars, and the eastern half from Great Salt Lake was constructed by an Eastern company. Government funds, however, were not supplied until the work was certified as properly completed over definite distances, the public funds being only an encouragement and aid to corporate enterprise. The initiation and completion of the western half were due, in large part, to the courage, prudence and perseverance of a single firm of merchants in Sacramento. Begun in 1865 it was completed in four years. Previously, in the summer of 1861, a telegraph line had been built in a similar way by two companies, one commencing that season at Fort Kearney, on the Missouri plains, and another at Fort Churchill, in California, and meeting, in about four months, at Salt Lake City. The magnitude of the undertaking seemed then very great indeed, for the line passed over a desert of arid waste, well nigh impassible mountains, with little water or wood on much of the route, and all the material, implements, food supplies, and men must be transported in wagons. Yet, once undertaken, both these great ventures were driven through with an energy that made little account of obstacles—except to devise the means of overcoming them.

These triumphant contests with natural difficulties indicate the dauntless spirit that animated the pioneers of the Pacific Slope. They were fully seconded in the East when Eastern aid was required, but the men of the West had disadvantages to struggle with that could not be experienced in the East. The Western pioneer was the Eastern citizen set down in the midst of new difficulties greater than he had ever known; but he found his courage and his intelligence equal to the demand. The great progress achieved required unwearied energy, prudent good sense and intelligence, with broad conceptions and a prompt daring almost peculiar to these regions. Anglo-American capacity was developed in new directions and special sectional peculiarities of character, acquirement and habitude were added to what the race before possessed on the Atlantic Slope and in the Mississippi Valley; but they are harmonious in interest and kindred in spirit with the rest of the Union.

Indeed, it may be said that, by a very effective process of "natural selection,' the persons possessing the most suitable qualities for use in this region of great opportunities were drawn there by the spirit of unrest and aspiration which has ever done so much to keep up human progress. Sometimes it was educated and conscious ability seeking a larger field; sometimes the instinctive promptings of uncultured and unconscious genius. Both here found the field and the means for doing full justice to innate capacities. Sometimes the educated scapegrace of the East or Europe would suddenly feel the promptings of unused powers, and become wealthy and honored; sometimes the penniless laborer, successful in catching a portion of the golden shower, would find that he possessed financial gifts of a high order, and become a power in the land.

The most various gifts found opportunity for a surprising development. Many extensive undertakings, originated and conducted by individuals for private gain but serving the public admirably, showed, before the railroads susperseded them, what it was possible for a single man to do when opportunity and stimulus were furnished him. An overland stage in the hands of one man had a route of 3,000 miles; 6,000 horses and mules, and over 300 coaches were used on the whole route. The cost of maintaining all these, and the army of employes to use them and maintain the stations for them and passengers on the desert plains and mountains over which the route passed, was immense. He received half a million of dollars annually from the Government for carrying the mails—for he had a daily stage—and five hundred dollars from passengers for a trip across the continent. Though costly it was a great convenience and a financial success.

Hundreds of opportunities which, in any other country, would be considered impossible for individuals to undertake were similarly found and made successful in connection with the early Pacific Slope development. Any other public would scarcely have supported such enterprises by a sufficient energy and lavish use of money. Americans almost or quite alone, of all people, venture to leap, at so great expense, from the conception to the realization of their undertakings. All American experience has tended to educate its practical men to hasten towards their ends rapidly, while the full flush of enthusiasm was on them, seemingly regardless of expense. Yet expense has been well calculated, though apparently disregarded. Great designs have been rapidly completed and made to pay. The world itself has caught some of this fiery energy, and all nations are now feeling its strong pulsations in some form.

California, and the mountain regions generally, have matured still further this spirit of bold, broad enterprise by the immensity of their distances and singular difficulties, and also of the rewards they were capable of yielding to it. Therefore settlers gain a certain breadth and freshness of mental tone on the Pacific Slope. The close relations between the East and the West produce a general reaction of this spirit through all parts of the country, so that the Republic as a whole is mentally matured in this quality of high enterprise —of dauntless undertaking.

There is not likely to be any serious or permanent arrest of this side of American growth. The opportunity for development within this vast area, on the Plains, in the South, around the Gulf of Mexico, over all South America and across the broad Pacific, under innumerable forms, is measureless—as yet. At ordinary times and with an ordinary people, it would remain so for centuries; but the American genius is so rapid that its flights can scarcely be followed—much less anticipated. The stalwart New Englanders and Virginians and their comrades of a century ago, became still more stalwart in working up the Great Valley, and they have not ceased that kind of growth on the Pacific Slope. There can scarcely be too much anticipated when reality has so greatly outrun imagined possibility as in the past half century of the Republic.

Another half century may find as large a population westward of the high crest of the Rocky Mountains as the whole United States now numbers. The Arizona valleys and mesas, the Utah and upper Columbia basins, will quite change their appearance under cultivation, and the amelioration of climate it will produce. California will be more delightful than the choicest portions of southern France, and western Oregon and Washington will excel central New York and eastern Pennsylvania or the Ohio valley, in the bountiful supplies of their fields and streams and green pastures. The commerce of the north Pacific will build up immense cities, vast manufactures, and distribute over the world the products of the forests of the coast, the abundant fisheries and the prolific volcanic soil. The interchanges between the East, the West and the Center—the Great Valley, the finest alluvial basin in the world—will be almost immeasurable in value. Thus the liveliest activities and a boundless prosperity will cover all the plateaus, fill all the basins and valleys of the wide Slope, and help to double the greatness and fame of the Anglo-American race.

THE ATLANTIC SLOPE.

CHAPTER IX.

THE BIRTHPLACE OF THE REPUBLIC.

This was on the Atlantic Slope and needed to be somewhat rough and rude to give the Englishman the training which should develop a new race—the Anglo-American. No one of the sturdy, sensible, vigorous qualities of a thoroughgoing race, as characterized in English history, was to be lost. The personal independence of the Teuton, as formerly existing in the forests of Germany, was to be preserved, and all the lessons in constitutional government which had been learned during a thousand years in the British Isles were to serve as models or warnings to the English colonists in the New World.

The traits of character that had made England a steadily progressive nation until, in 1688, the Representatives of the People—its Parliament—became the paramount authority, and established a substantial republic under the forms of a monarchy, were to be preserved and to acquire greater freedom of action in the Western Wilderness. To safely reject King and Aristocracy a long discipline of the masses who were to be the final depositaries of power was needful. A hundred and fifty years residence on the Atlantic Slope prepared the way for this new essay in government. Thirteen colonies settled the long line of coast from Maine to Georgia, each having direct relations to England, the ocean as a common highway, and considerable resources in their forests and lands.

There was a rich reward to be gained at the cost of labor and danger. They came from the most practical and self-controlled stock in Europe and were satisfied to settle at once to the work they found to do. They had sufficient courage and determination to face all difficulties—the discomforts of isolation in a wilderness, the forests and their wild inhabitants, animal and human, and the labor required to reproduce the prosperity of old England in the rocky soil of the new. A renowned race had its beginnings at Jamestown, in the Old Dominion, and at Plymouth, in the Old Bay State, in the early years of the seventeenth century.

The region in which they built up these free commonwealths—which, more than a century and a half after the first colony landed in New England, became the United States of America, "free and independent," owning no law but that conceived and ordained by its own citizens—was nearly the oldest land made on any continent. Parts of it, at least, were raised at the beginning, or when dry land first appeared above the St. Lawrence from Labrador to Lake Superior. Northern New York—the Adirondack region—and perhaps parts of northern New England, were then permanently elevated. Very soon land became visible near the present shore line of the Atlantic, and was worn down for countless ages to help form the vast accumulations of stratified rock along the site of the future Alleghany Mountains.

The force that came from the sinking ocean had acted as a lever against the higher crust that was to be the land. It operated very slowly and gradually wrinkled the crust without breaking it. The first fold seems to have been upward and perhaps two hundred—possibly, in places, many hundred—miles wide. The next fold, or crease, was downward, along the site of the future mountains. In this depression the wash of the land and the constant movement of the sea gathered sand and mud and the limestone shells of the innumerable animal inhabitants of the waters, and thick layers of rock were laid one over the other. This seems to have weighted the crust along the depression and increased the downward tendency. The sinking was slow and rock formed as fast as the under crust descended, for most of these rocks give evidence of having been formed in water only a few hundred feet deep. The under side of this downward fold is believed to have been deeply immersed in the vast sea of fiery liquid over which the whole crust of the earth was spread and to have melted away in the center. As the pushing force from the ocean gathered strength toward the last part of Palæozoic time, when the crust became thicker, the under sides of the rock bordering the melted part gradually closed together.

This would tend to heave up the center of the depression, and, in time, the layers which had accumulated there to the depth of eight miles were raised into the mountain chain of the Alleghanies. These rocks which had been formed in water were softer and furnished a richer soil when worn to dust than the original crust, or the Azoic rock first laid over that. For this reason parts of New England, where the mountains are more largely granite, the original crust, or such rock as was first laid on it, is rougher and less favorable for agriculture than the region from central New York to Georgia. As the summits and sides of the Alleghanies were worn by frost and storm and running water a mantle of fertile soil was formed on the Slope toward the Atlantic from northeastern Pennsylvania southward. The vicinity of the ocean, the course of the cloud-bearing winds, and the condensing power of the mountains secured abundant moisture, and a fertile soil resulted from the unbroken succession of vegetable growth and decay for an immense period of time. The English colonists, therefore, found a good farming region, when the forests were cut down, all along this Slope.

Near the sea, in later times, after the mountains were raised, there was considerable movement. It was higher than now, at one time, and the distance from the mountains to the coast line was greater by about a hundred miles. Then it became lower than at present, the latest formations of rock were laid some distance inland, and this tended to increase the agricultural value of the region immediately bordering the sea. New England was more or less enriched during the Glacial Period. The ice flowed over much or all of it and left the Drift, which so enriched the Mississippi Valley, in its depressions thus toning down its sterility and native harshness and furnishing it much good soil.

Before the elevation of the Alleghanies commenced the region along their future site was at and just above the surface of the water from New York to Alabama and the most abundant vegetable growth anywhere known over a territory so extensive was made into coal to be elevated with the mountains. A vast amount of the best of this coal was on the eastern side, within easy reach of the ocean, near the shores where the largest cities and the centers of industrial activity were afterward to be located. The heat developed during the raising of the mountains turned this into anthracite, or rock coal, the purest and most concentrated fuel known. Its value to the Anglo-Americans after they had consolidated their new government was to be quite beyond computation, and to furnish the means of ultimately rivaling the Mother in manufacturing and commercial industries.

The rocks were also rich in iron and some other metals, and in the finest marble and building stone. Central, western and northwestern New York were geologically separated in formation from the Atlantic Slope. They formed part of the interior basin and shared richly in its provision for great agricultural resources. It became an exceedingly valuable farming region and its vicinity to the sea coast, the partial interruption of the mountain chain, and the rivers that flowed from its borders to the Atlantic as well as to the Great Lake system conferred on it singular economical advantages. In the south the mountain chain disappeared, leaving some hundreds of miles between its lower extremities and the Gulf, so that the colonies of the coast found ready access to the vast and productive Valley when they should become so firmly established and numerous as to feel inclined to occupy it.

No great amount of precious metals was stored in the Alleghanies, and much of the soil yielded profitable returns only to persistent care and toil, so that the ancestors of the future great western nation were not demoralized by too easily gained wealth, and became hardy, economical and thrifty under the healthy labors which prosperity in this region required. There were resources enough to stimulate them to industry by a good reward for their pains, while the Atlantic furnished them a pathway to the best markets of the civilized world. The fisheries of the northern coast were a source of gain and educated a large class of hardy and skillful mariners.

Thus all the required conditions for the development of mental and material independence were supplied in the right measure to the early emigrants from England. Many of them, and especially those of New England, had fled across the ocean for the sake of mental and religious freedom, and the remainder, as well as emigrants from other European countries, were sufficiently like them in mental aspiration and industrial habits to be impelled in the same direction by the new freedom from restraint and the new influences that began here to guide them. The English gentlemen of the middle and southern colonies, the Hollanders of New York, the Swedes of New Jersey and Delaware, the Germans of Pennsylvania, and the Huguenots of the Carolinas all caught the same spirit and sympathized with the sober and restrained impatience at foreign interference of the Puritans of New England. They all began to lay aside the narrow prejudices inherited from an immemorial past in Europe. The clear practical sense and directness which had always silently and secretly guided English history, and was the progressive element of European society in general, here found itself almost unincumbered. At least, it was stimulated in these lonely wilds, and came into vigorous action in the dangers and difficulties of a new region, in contest with the Indians, and in the large amount of self-government which had been granted by colonial charters to encourage emigration. The full exercise of these liberties was favored, during the early days, by their distance from the Mother Country and the seat of Government.

This intelligent independence and self-reliance was of slow growth, but became completely characteristic of the masses of the people of the Thirteen Colonies long before the revolutionary period. There was therefore no violent change when the want of perception of this state of things in the colonies by English statesmen led them into great mistakes in their colonial policy, and induced the colonies to unite in throwing off European control. It was an event as natural as the bursting of the plant into flower and fruit. The republic did not have its origin in this want of discretion of the English ministers and the obstinate resolution of the English government to rule its colonies as dependencies and subject lands. It already existed in the character and habits of the people. The restrictions put upon their industries and commerce had long been felt as unjust and oppressive, and endured because some advantages were received from the prestige and power of England. When the English ministry and Parliament proposed to tax them without consultation or their consent they already felt themselves to be a nation capable of ruling and protecting themselves, and their moderate but firm resistance was a common impulse, from Boston to Savannah.

Without any violent shock to the institutions already existing among them, they declared their independence in a noble and dignified appeal to the good sense of mankind, formed a provisional central government for conducting the war, and managed their local affairs as they had long been accustomed to do. Only after twelve years of experience and consideration did they decree a final and definite Constitution; and, when this was framed and went into operation, it was found to be so far-sighted, so thoroughly practical, and so well adjusted to an indefinite expansion, that the vast growth following required very few changes, and none of any real importance till the epoch of the Civil War.

Though these people arranged their republic on certain principles that were very radical, and rejected many things deemed essential to the stability of political and social order in the Old World, they were yet strongly conservative as to the institutions then established, and not depending on colonial relations with England. Few changes were made in State or municipal affairs, and social conditions were left to arrange themselves according to their inherent laws. They did not attempt to arrange an ideal republic; they were extremely practical and self-restrained. They endowed the central government with vigorous powers reluctantly, and only under the pressure of imperious necessity. In many ways they displayed the moderate, cautious spirit of genuine Englishmen. They left the way open for progress; but they cast nothing aside because it was old, and adopted nothing new without careful consideration or some pressing necessity.

It was a remarkable piece of good fortune that placed the boundless resources of the best parts of North America in such prudent hands with so little restraint on their action. They conducted their affairs with the cautious wisdom of statesmen and, at the same time, with the boldness and directness of theorists. Jefferson and Washington, the Democratic and Federal parties, embodied these two principles. Washington and Adams, of the Federal party, first organized and guided public affairs. They were representative of the conservative tendencies. Jefferson then took the lead, and the more progressive republicans ruled the country. Yet the general changes in the policy already inaugurated were comparatively slight. No violent contrasts were observable, and no disorders of importance occurred. The Englishmen brought a scion from the tree of British liberty, and grafted it on native American stock. It grew with a vigor and produced with a fullness before unknown. It was a healthy growth and took on still higher qualities as it was propagated in the new regions westward.

Industrial and commercial progress were extremely marked, although three million men with so vast a region to open must find time an important element in their calculations. They had little capital and small experience of varied industries. All manufacturing in colonial times must be done in England, and commerce was restricted to the same country up to the opening of the Revolutionary War. The countries of the Old World, with their inheritance of organization, of skill, and of capital, must long have the best of the race in this direction. Americans occupied themselves for nearly three-quarters of a century in building anew. Commerce and manufactures were secondary to growth, and only received such enlargement as the special requirements of the people and the circumstances encouraged. Pioneering and extending boundaries into an unbroken wilderness was rude work; but it was attractive and promising in respect to the future, and the energetic and aspiring on the Atlantic Slope went west by hundreds of thousands. The East was long drained of its most valuable youths and effective men of business, as of its capital, in peopling the Great Valley and assisting its pioneers to clear the passages from it to the outer world. Its children and its funds flowed westward in a steady stream, and not till 1850, when railroads began to furnish a sufficient outlet, and the gold of California replenished capital, did returns begin to come back in full measure.

But the people who remained behind had not been idle. Inventions of vast importance had been utilized, a part of the flood of immigrants from Europe had remained in the cities and manufactories of the East, had dug its canals and built its railroads, and been the efficient arm whereby the busy brain of the American executed its great conceptions. Already commerce had grown to hundreds of millions and a multitude of industries had filled the country with prosperous towns and cities. Its agricultural resources had developed to great proportions and its mineral resources had been drawn upon very largely. Such prosperity on so large a scale and in a period so brief was unexampled in previous history, and could only be excelled by the future growth of the vast Valley and regions of the West where immeasurable resources were waiting to be used. Every form of growth in the East —all its accumulations of capital, its industries, its fertility of mental resource—was so much added to the sum of resources employed for the development of the West.

There was a rich reward in these investments, for the farms and lands, the produce and minerals, the railroad stocks and all kinds of prosperous enterprises were largely owned in the East and their successful results made countless millionaires in its cities. The time came when these results reached colossal proportions and the flow of wealth stimulated manufacturing and commerce and spread prosperity over all the Atlantic Slope. It became possible for single individuals to accumulate scores of millions in a single lifetime, and the chief cities became vast monied centers.

Before the Civil War the value of cotton and of forced labor made the whites of the Southern Atlantic States extremely wealthy. The war reduced them to poverty, for the time, and the boundless accumulations of capital remained chiefly in the northeastern, but especially in the middle, States. From the Potomac to the Penobscot every form of the most profitable industry prevailed, occupying many millions of people and employing many hundreds of millions of capital. From the northern sea ports issued most of the exports of the country. To them came the imports that were to be distributed by the railways which centered here, the vast ramifications of which put the most distant regions of the republic in connection with these financial and commercial capitals. Here also were the leaders of thought, the best colleges and educational institutions, the largest libraries, the most influential and widely-read newspapers, here were gathered the writers and artists of national reputation. Here was transacted the largest amount and the widest range of business, both with the country at large and with foreign nations. Here great undertakings were planned and organized; the railroad and mining companies of the distant West often had their principal offices here. It was the great heart of the country from which vital force was sent out through the various arteries of activity and to which it came back with its gathered results.

The wise statesmanship, the cautious boldness, the enlightened enterprise of the earlier times which laid such solid foundations for a new race and nation were bearing fruit the full and overflowing measure of which was returning to the spot where its beginnings had been nurtured. The East had done its utmost for the West; the West had found its resources beyond measure rich and now made full returns ungrudgingly. The Atlantic Slope had developed the best and broadest characteristics of the Anglo-Saxon, the West had received and still further Americanized and elevated him, and all the divisions of the new race were now bound together by the most valuable reciprocal benefits and relations of sympathy and interest. The East and the Center united in the development of the Pacific Coast in the same spirit of enlightened liberality, and this region, which could be reached only through the difficulties and perils of arid deserts, sterile and almost impassible mountain plateaus and ranges, or stormy seas, returned the cordial sentiment in the most pleasing and useful form. A vast and prosperous empire might easily have established and maintained independence and grown strong in stately grandeur on the genial shores of the broad Pacific and among its wealth of mines—its mountains of gold and silver. The natural barriers could not easily have been overcome. All the necessary elements of a boundless prosperity were in its hand if it chose independence. It had already grown rich and strong when the Valley and the East became involved in a disastrous Civil War; it could easily have cut the bonds that bound its fortunes to the Republic beyond the high plateau and snowy peaks of the Rocky Mountains.

In this case the greater future of the East and the Center would have been much modified by confinement to activity on the Atlantic and the Gulf. The large and free activities of a united people would have given place to the embarrassments, the jealousies and mutually obstructive policies that have so much hindered the free progress of the world, and of which Canada is a conspicuous example. An imaginary line would have arrested reciprocal action and cut short mutual profit; while the expenses of public management, of general, and many local, interests would have been nearly doubled in very many cases. The costly machinery of government must have been greatly enlarged, the number of officials much increased, and a great sum spent in mutual international observation and formal intercourse.

This misfortune was avoided entirely, scarcely existing even as a danger, through the operations of the singularly wise, liberal and high toned policy toward the Territories and unorganized regions—indeed by all sections toward each other—conceived and inaugurated by the founders of the Republic on the Atlantic Slope. If, in one case, antagonisms grew up and ripened into the most lamentable results, it was from causes they had not introduced, which they wished, but did not feel able, to set aside and which only after seventy-five years grew to threatening proportions. This high policy prevailed in the end, even in this case, and ultimate harmony and unwasted strength will be secured to the mutual satisfaction of the North and the South. California and the Pacific Slope were faithful through temptation, as the Valley had been at an earlier period. No policy that could waste the common strength or resources was heeded. The East had ever been just and liberal, the West corresponded in gratitude and fidelity. The gold and silver of the mountains flowed to the East and passed into the common channels of trade, enriching the men of business—the merchants, manufacturers and commercial classes—of the Atlantic States, and greatly hastening the development of the new regions and commencing industries of the Valley.

Then the barriers of distance and mountain heights disappeared by the extension of the telegraph and railway systems across the plains, the mountains and deserts; and the thought, the energy and enterprise of the whole country were massed and flowed freely back and forth between the two sides of the vast continent—and soon found equally free course between North and South. Such are the great results of the enlightened experiment of the English colonists of the Atlantic Coast. The children are reaping what the fathers sowed. All the resources that lie in the agriculture, the minerals, the sea ports, the manufacturing skill, of this comparatively sterile region are highly developed while the surplus wealth produced in the rest of the country flows here as to its natural home. The Atlantic Slope acted in a large minded and benevolent spirit and reaps the richest possible reward.

It has already been shown that the country was unified and thoroughly Americanized in the Great Valley, which put Europe out the thoughts of the people by concentrating attention on this vast interior and its boundless wealth, and by making the United States so largely sufficient to themselves. It may also be said that the whole country was unified by the Atlantic Slope, which sent its children—multitudes of its best, most vigorous and most intelligent citizens—to colonize and develop the other regions; gave them all encouragement and aid when possible; and legislated for them or left them free to legislate for themselves with equal wisdom and justice. Its spirit was so enlightened and appreciative that its citizens, so transferred to virgin soil, at once perceived the broad features of the new situation by virtue of the comparative freedom from narrowness and prejudice of their Eastern education, and the intimate sympathy that existed through all parts of the country united the East and the West in the most perfect bonds. This common sympathy was the natural fruit of the highminded system of thought and conduct established and cultivated in the East.

It is true that this was largely due to community of business interests and so, in many respects, had a material basis; but this fact does not diminish, it enhances, the estimate to be placed on Eastern prudence and wise, far-seeing management. No people before known to history had been clear-sighted and self-restrained enough to leave natural laws to exert all their influence unmolested. These Americans of the Eastern Coast had the unusual penetration to discover when to refrain from interference and when and how to give effective aid. The fundamental Law, or Constitution, was so clear and just as to allow the perception, or instinct, of each time and place to regulate current affairs according to their requirements. This is no slight praise, and met with no measured reward. Complete confidence, reciprocity and unity were the result, and the gains of the East were unbounded. When wealth was acquired in the Valley and on the Pacific Slope it tended to flow east with a fulness proportioned to the freedom with which it might ever act.

Business laws may, and do, reciprocate justice by warm gratitude. They ever tend to bless those who, by giving them entire liberty, enable them to secure the highest success. The violation of this rule in the later part of the eighteenth century by the English Government cost it its thirteen American colonies; and the recognition of it in the nineteenth has preserved to it Canada and all its other colonies. So not even the large number of southerners who found their way to California and Oregon at the close of the Civil War could incline the new States of the Pacific Slope to seek independence of the mother Republic east of the mountains.

The Original States therefore had, in a large measure, to thank their own free and highminded policy for the extraordinary stimulus which so developed all their interests.

CHAPTER X.

THE DEVELOPMENT AND PROSPECTS OF THE ATLANTIC SLOPE.

Settlements were first made on the bays and rivers having the readiest approach to the sea. From these tide-water points population spread in the direction of the best neighboring lands, which lay chiefly in the river valleys. There being an average distance from the sea to the mountains of one hundred and fifty miles in New England and two hundred further south, with much land of fine quality and very moderate markets in the early days, there was little temptation to brave the dangers of the interior for a long time. Even the upper Susquehanna was unoccupied at a comparatively late period. Its northern tributaries as well as the Mohawk—the principal western branch of the Hudson—were occupied by the Iroquois Indians, or Five Nations, the most imperious and politic and the most dangerous to offend of all the tribes known in those times. It was not till the generation preceding that of the Revolutionary War, or about 1750, that considerable settlements began to form under the eastern shadow of the mountains. The contest with the French for the possession of the interior of the continent, during which they had opportunity to compare themselves adequately with European soldiery, made them acquainted with their own eminent qualities and, at the same time, more fully with that interior.

At this time the spirit of unrest and adventure seemed to take possession of them in a much greater degree than before. They ceased to fear the Indians, and boldly ventured into the depths of the vast forests stretching eastward and westward from the mountains. By the time the Revolutionary War closed they had formed many new settlements, and acquired title to a section of country several times larger than that actually occupied in 1750. Up to this time population had swung away from the Atlantic tide waters very slowly and reluctantly; part of it now renounced its attachment to the coast and eagerly sought distant localities. The fine valleys of central Pennsylvania and central and southern New York were as quickly settled as the eagerness to cross the mountains to the Ohio and its tributaries would permit. The Five Nations of central and western New York had taken the English side in the war. At its conclusion they found their power broken, their prestige gone, and many of them passed over into Canada leaving one of the finest farming regions on the continent open to settlement by the freemen who had shaken off the control of the most enterprising nation in Europe.

This region, which now seems but a step from the coast, was then reached with great difficulty. Although the chain of the Alleghanies here lost its usual height it was still represented by an endless series of hills and valleys, and the principal streams issuing east and south were so shallow and rapid as to be of little value as common highways. Yet population steadily pushed up the valleys, and was distributed over the fertile hills by tens of thousands. Soon the Erie Canal was conceived by Clinton, a Governor of New York truly representative of his race and century, and in the very dawn of great American enterprises, soon after the close of an exhausting war, it was commenced, being completed in eight years, or in 1825. It joined one of the water systems of the Great Valley with the tide-waters of the Atlantic, and was of incalculable advantage to the West, to the eastern cities and to central and western New York. The Ontario basin, the charming valleys opening into it, the verdant and fertile hills about it were immediately occupied, and their abundant surplus products found little difficulty in reaching a remunerative market.

This region was greatly favored. Almost the first extensive line of railway was built through it, and it then had a double outlet for travel and produce. The railroad and the canal were natural rivals, and rendered any oppressive monopoly of carriage impossible, so that the agriculturist here had every possible advantage—the soil and climate of the Great Valley, nearness to the best markets, and the cheapest possible transport to the sea-board some years in advance of more distant regions. A speedy and thorough development and unexampled prosperity were the result. With eight thousand square miles of surface less than Illinois, one-third of it was rendered comparatively unprofitable by the extreme roughness of parts of the mountain system that crossed it. The northeastern part of the State is underlaid by primitive rock, or granite, and comparatively barren, that which is not encumbered with mountains belonging to the first primitive continent and overlaid with comparatively little recent soil. Two-thirds of the State, however, lay within the borders of the interior basin during the rock-making periods, and have representatives of nearly all the rocks formed in the Mississippi Valley, which are here also very generally covered with the soft and chemically-rich alluvium that renders that valley the great granary of the world. West of the mountain chain near the Hudson, the hills have a rounded outline and are fertile to their very tops. The valleys and the basin of Lake Ontario are almost as rich in soil as the prairie and river bottoms of the Valley of the Mississippi.

With all these advantages New York early took the first place as an agricultural State, and held it with ease up to 1870. At that time the value of the farms in the State was $1,272,000,000, being $218,000,000 more than Ohio—the next in rank—and $238,000,000 more than Pennsylvania—no other State then reaching the value of one thousand million. It is not unlikely, however, that several of the Valley States of much greater size, all whose rolling surfaces are adapted to the most profitable use, may now be found ahead in this branch of development. The reduction of freight tariffs by the multiplication of railways and by the use of three water routes has helped greatly, in recent years, to equalize the disadvantages of distance from the greater markets, and the rapid increase of manufacturing and of towns and great cities in the central regions has produced a vast local market of their own. Yet New York has permanent advantages of position and resources, and must always take high rank as an agricultural State. Her possession of the commercial metropolis of the country also causes her to take first rank in manufacturing—the State following next in the amount of manufactured products falling nearly $75,000,000 below, the third nearly $230,000,000 below. The census of 1870 gave her manufacturing products a valuation of more than $785,000,000, those of Pennsylvania at $711,000,000, and of Massachusetts at $553,000,000. No Western State then manufactured to the extent of $270,000,000. A large part of the imports of the country are received at New York, and a large part of Western produce reaches New York City for distribution or export. Much of the product of precious metals from the mines of the Rocky Mountain region reaches here, also.

New York is therefore, in many ways at once, the most important State in the Union, and New York City is the Metropolis of the New World as well as of the Great Republic. They are both likely to maintain most of these relations for an indefinite time, some of them probably always. Many other States are likely to surpass her in farm values, as they already begin to do in acreage in use, and it is possible that, in time, the lead in manufacturing may be taken by some of the western States. This, however, is uncertain. Position and possession of the lead in commerce and finance unite to secure her future leadership of some, at least, of the most important interests of the country, and may maintain as great a rate of progress in manufactures in the future as in the past.

Pennsylvania is another State of immense and peculiar resources. Between the Susquehanna and Delaware rivers in the southeastern part of the State is some of the finest land in the East; the valleys among the mountains are extremely rich, and the value of the coal within the State is beyond computation. About one-third of this State lies west of the water-shed separating the Great Valley and the Atlantic slope; but probably the most valuable beds of anthracite coal in the world are in the eastern section, within easy reach by railroad and shipping of the largest seaboard cities and manufacturing points. The railways across the mountains take vast quantities of western produce and trade to her great city and seaport—Philadelphia—and manufactures flourish beyond measure, being second only to those of New York. The Ohio on the west, the Delaware on the east, innumerable railways, a position approaching the first rank on the east, and an important one within the Great Valley at the west, are all favorable to her progress in commerce, manufactures and general development.

New England must always be eminent both for manufactures and commerce. Its relations with Canada and the vast undeveloped resources of that New Dominion, with Europe and the general commerce of the Atlantic, the intelligence and enterprise of its people, assure to it a future development difficult to overestimate. New Jersey and Delaware, with the eastern parts of Maryland and Virginia, lie just above the level of the sea, and some of the most recent geological formations are found there. Although the soil is much encumbered with sand, that is very much enriched by the wash of the long slope further west while these sections were in part under water. Vast quantities of marl, collected at the former mouths of rivers and an ancient coast line, supply it fertilizers, the sands retain much vegetable loam, receive and retain the warmth of the sun, and are well watered by the clouds. They are therefore very fertile by the aid of phosphates and other stimulants of vegetation so abundantly obtained beneath the surface and from the sea. This is the garden and orchard of the East. Already largely developed as such, a great future awaits it as manufactures, commerce and trade increase the cities in its neighborhood requiring vegetable food supplies and fruit.

Virginia and Maryland back of the immediate sandy coast have much good soil which has been misused, or not improved, under the unfortunate labor system now banished. The Chesapeake Bay with its numerous ramifications and ample river mouths, gives them excellent commercial facilities. The relations of the western portions with both the Lower and Upper Basin of the Great Valley through gaps in the mountains will tend to increase commerce and trade here, as well as manufactures, and all the elements of fertility the soil possesses will be made available, at no very distant date. Great activity and extreme prosperity will soon render this region, with its innumerable harbors, its almost semi-tropical but salubrious climate and excellent soil, prominent among the richer sections of the Union. North and South Carolina, the Atlantic border of Georgia and Florida have much good soil arranged in bands, from the coast to the mountains, with various adaptations. The Swampy coast will some day be diked and drained, furnishing a large surface extremely fertile and adapted to special uses of great importance. Cotton, tobacco, rice and rare tropical fruits will produce immense values when the lowlands shall be fully utilized, the region in general will lend important support to the activities of the coast further north and supply many comforts and sources of wealth to the country at large—some perhaps not now suspected. Its real development has not yet begun. Its significance in commerce, in manufactures and trade will be appreciated only in the future when the regions about the Gulf of Mexico are in full development, when the South at large has taken its proper place in the Union, when the Isthmus Canal is in full use, and South American countries reach a fair industrial development.

Thus it is seen that each division of the Atlantic Slope has a specialty, a series of relations that are to become far more significant in the future than they are at present, and which insure great future growth, at the least. How vast this is to be in the case of the northern and southern seaboard can not yet be fully foreseen. The prosperity of outside regions lying contiguous must determine this to some extent. The northeast and the southeast will be very important elements of prosperity to these neighboring regions, of necessity, and may soon become immensely so. They must grow with the rest of the country as the middle Atlantic States have done and are doing, although less in proportion, being at one side. When Canada reaches her maximum rate of growth and Mexico, the West Indies and South America are in full industrial career—with reciprocity of trade with the great central republic—the balance of advantage now in favor of the middle regions will be very much—perhaps fully—redressed. As Canada and New England have an important geological unity so their industrial and commercial interdependencies are more important to each other than almost any others. New York City is as much the natural metropolis of Upper Canada as it is of western New York, and New England and Lower Canada have supreme interests in common. The coal of Nova Scotia, the lumber of the Province of Quebec, are necessary to New England, the fisheries should be held in common if natural relations were to control them, and the products of the vast northwest of the Dominion should reach the coast by Boston, Portland and other harbors, for part of the year at least. The large field for manufactures furnished by the United States must be fully opened to Lower Canadians on equal terms with New England before their prosperity can be complete.

All these questions will be arranged in the mutual interest of the various parties, in time. Industrial forces will learn to act independently of political differences, for the Age of Reason has already dawned. Many other questions have been settled by the law of interest during the last half century and all the rest will be arranged in their turn. This certainly secures the future of the North and South Atlantic States. Their era of colossal development has only begun. New England, which has done so much, is to do incomparably more; and the States south of Virginia have every reason to consider their past and present as nothing compared with their future. Already the surplus of the northern and western regions of the Valley are beginning to flow from Cincinnati, Louisville, St. Louis, and many other points through the defiles of Tennessee and northern Georgia to Savannah and the southeast coast. The southern basin will soon begin to pour its own growing flood of production in the same direction, to which, in due time, will be added the vast treasures of northern Mexico, New Mexico, Arizona and southern California. Great industrial interests in the Antilles, the northeastern States of South America, and in western Africa are springing into life and will arouse activity along the south Atlantic Coast of the United States to correspond.

There is to be no monopoly of wealth and progress hereafter. What natural highways can not do for each section artificial ones will accomplish, and Unity in Diversity, diffused prosperity, interdependent resources and wealth will cement the political union while it assures the freedom and sufficient independence of each of the component parts.

CHAPTER XI.

THE EAST AS A LEADER.

The great, smooth, fertile center of the United States—variously and endlessly productive from the higher slopes of the Alleghanies to the steep sides of the main ridge of the Rocky Mountains—naturally impresses itself deeply on the character and history of the people. The unity of its river system and the continuity of its almost level surface from Fort Benton to Pensacola and from Pittsburgh and Duluth to New Orleans and the mouth of the Rio Grande furnish a breadth to activity and a fullness of reward to industry that give it indisputable rank as a leader. The mass of the people are already there, and, since majorities rule, the Great Valley can give a decisive answer to every question on which its whole population unite.

The great golden West beyond the plains has already shown itself an important factor in national affairs. However small its population it is financially strong—a treasure vault, a bank of hard cash for the country—and is daily acquiring weight by its many resources and the wonderful future whose grand outlines can even now be slightly sketched. It does not require the gifts of a prophet to comprehend that the grand Republic of the New World, with its new race crowned by the halo of industrial and commercial genius, has not reached a limit at the Pacific shore. It is a new beginning, a fresh commencement of growth, at least as much more majestic than any possible with the Atlantic alone as a commercial highway as the Pacific is more ample than the former modest ocean.

America began to loom up vast and mighty to the eyes of Europe, the merchants and manufacturers of the Atlantic

Slope began to gather princely fortunes, and the Great Valley to bring all its immense surface into market for use when the first State sprung up on the Pacific Coast. The whole country became conscious of its greatness when the gold of the West began to flow in a powerful tide of surplus capital into the channels of trade, furnished the means to build railroads and developed all lines of business in equal proportions. The wealth of the Pacific Slope has not yet been gauged, Pacific commerce has only begun. The view of future possible progress by these means stretches off beyond the Pacific a boundless horizon. The Pacific Slope began at once a magnificent leadership.

But the Atlantic Coast was the birthplace and is still the home of the brilliant Anglo-American Race and its mighty fortunes. All that is most excellent in thought, in character, in conduct, in institutions, inventions and industries first sprang up here before being transferred to the larger field and the broader career of the West. Nor was the East prolific only of beginnings. Stimulated by a large field opened for supplies in the West it gave itself to perfecting what it had begotten. Its children it educated with zeal and carefulness, after the most approved methods, before sending them West. It labored after the best systems of law, of politics, of religion, and contributed them to the new communities beyond the Alleghanies. Its press, its forum, its pulpit grew constantly purer, more intelligent and high toned, more nervous and forcible, and labored earnestly for the best interests of the young States and Territories. Mental and moral activity constantly rose in ardor and deepened in their intensity, re-arranging, improving, inventing, to present the best and most perfect products of their labors to the West.

Many of its best educators, its most promising youth, its most experienced and successful men of business it supplied to the new States, that they might lay the best possible foundations for future excellence. Much of the legislation of the nation for the new regions was in the same kindly and unselfish spirit. But the millions of its children it sent west did not leave empty homes and dwindling cities and industries behind them. Those who were left received other millions of immigrants, the peasants and artisans of Europe, put them in the fields, the kitchens, the workshops, the manufactories, and trained them to be good American citizens. They did not allow themselves to be overrun or controlled, to be outvoted or their progress embarrassed, because their own people were drained away and strangers took their places. The vigor of order and patriotism never waned on the Atlantic Slope. It was a most remarkable history. Rome, depleted of its citizens of the old and vigorous stock in the course of its conquests, lost its purity and self-command, and became a hideously criminal and dying Empire. The Atlantic States were constantly sending off the old stock in a widening and deepening tide of emigration to a score of States in the Mississippi Valley, yet maintaining and strengthening the old tendencies with constantly increasing liberality and thoroughness.

It was, therefore, a natural and necessary leader, and maintained a general and very natural control over the development of the new regions. If the young States learned new lessons the old mothers conned them carefully and appropriated all the good of them. They never fell into dotage and stereotyped forms, maintaining a healthy progressiveness, constantly learning, rejecting the imperfect and adopting the improved, or, at least, making fair trial of all that seemed to be so. Its business men projected western enterprises, made investments and profited by new openings for gain and the great rise in property values produced by the increase of settlement. Although this was in the pursuit of personal gain it was a great advantage to a new country to have men of foresight and resources of capital interested in its growth and prosperity.

So, for their own ends, but not less to the well-being of the western pioneers and settlers, New York dug a canal that connected the waters of Lake Erie and Hudson River, and furnished water transportation from the upper Valley to the sea; Pennsylvania improved the road from Delaware River to Pittsburgh, and dug more or less canals; and a national road, called the Cumberland, smoothed the land passage from the Potomac to the Ohio. The genius of Fulton and the capital of the East had perfected the steamboat which Hudson River, where it was first used, may be said to have presented to the Ohio.

Here was the appropriate work of a leader done as efficiently as could be desired. In all good words and works pertaining to civilization, industry and general progress it instructed and aided the West as only an old country can a new one. But there was a great want of capital and the East was itself a new country with no large stores of accumulations. The commerce and manufactures of a great country had to be created after the western pioneers had commenced to multiply new States. The surplus products of the Great Valley itself were largely employed by the diligent enterprise of the East in gathering the necessary wealth. It stimulated production West by its great activities; exported, imported, manufactured, invented, multiplied machinery that economized human muscle, and, in a thousand ways, contributed to Western success—but in nothing more than by its own successful finance. The increase of its own wealth, its manufactories and cities and commerce furnished vital force to the new States by giving them markets. Otherwise they would have been buried and helpless under the surfeit of their own unsalable products.

Such was its successful leadership up to the introduction of Railroads. The beginnings of railroad enterprises date about 1830; but they made slow progress for many years. Time was required to learn the methods of organization and operation, and especially to obtain the requisite amount of capital to invest at once in all the numerous branches of business connected with them and supporting them. But the energy and activity of the Eastern cities made them money-centers to which the surplus funds of the whole country flowed. By the time general development was fully prepared for great railroad systems California gold came by hundreds of millions to supply the remaining want. The Atlantic States had already pushed railroads from the sea to the borders of the Valley. They now extended them to the Mississippi and completed the outline eastward of that River from the the Lakes to the Gulf.

By this time, too, the system of electric telegraphing had been perfected at the East, and spread in a much larger network of lines of instant communication. What leadership could have been more consummate and admirable than all this? It is true that all this inured to its own profit, to the extension of its business, and even, in a large degree, to a monopoly of it. The country was as if concentrated, or centered, at the East. Yet it was an equal advantage to the country so centered. Commerce must have its depots and points of departure on the seacoast, and manufactures cost too much in the building up to be readily transferable. To be within cheap and speedy reach of them was an extreme advantage. In time the growth in trade and manufactures would be diffused by the very means that now gathered them at one side.

Thus the East cared for foreign interests and internal communication, and greatly prospered by it, while the West gave all its attention to the development of its magnificent territory; its principal gain lying in what it newly built and in the facilities it collected for producing an annual income. The East made the ready money and reaped the general movable harvest, and grew most comfortably and desirably prosperous.

Then, wise and far-seeing as ever, it took measures to retain the leadership it had gained against the dispersing influence of steam and telegraph. Great centers, populous cities, large manufactories began to grow up on the lakes and rivers of the Great Valley. Had the East rested on its laurels it would have become comparatively insignificant—merely the place of embarkation and debarkation of a part of the oversea trade of the more weighty section of the country across the Alleghanies. But the vigor of its early days still remained. It held the financial and intellectual capitals—thought and planned with a boldness and wisdom that maintained its pre-eminence by ever new and important contributions to the national welfare. This was a line of development, a direction of growth that had made it the greatest factor in the progress of the Anglo-American race. There is, as yet, no sign of weakening or faltering in this growth. Great enterprises in the Valley, and the mining, railroad building and commerce of the Pacific Slope are inspired and guided from New York and Boston. If a broad and brilliant plan occurs to a citizen resident in some other section he comes here for consultation, organization and support; or, commencing elsewhere, fails of sustained comprehension and aid and his scheme falls into Eastern hands before it can succeed.

It is intellectual pre-eminence that thus maintains leadership of progress. Possibly it will always remain so. Railroads in the West more and more combine to secure the readiest and cheapest line to the Eastern seaboard. Great operations of all kinds designed to gather profit from a world-wide field find this the best location for a base. Though at one side it still maintains many of the prominent features of a general center. The world of men—the human race—is becoming so unified and so accessible in its most distant and difficult retreats by the help of electricity and steam that it matters much less than formerly where the center from which organization and impulse proceed is located. One side or the other of a mountain chain makes less difference than how the people have learned to think and act. Where the thinking is wisest and the action the most prompt and effective is the necessary center. The East has held and long will hold this leadership without any serious envy or anger in the other sections. They are only too glad to profit by new, brilliant and invaluable inventions, suggestions and improvements.

Light bursts periodically from the matured thought and acquired skill of the East. It has made the most of steam for the benefit of the whole country; it has perfected instruments to use the mysterious power of electricity to overcome space and time still more completely; and it is diligently laboring to adapt that wonderful force to other uses. Through the intelligent enterprise of its capitalists the Electric Light promises to become an economical illuminator for the world of men, to be used with far less expense and danger in all the business and homes of the people. It is not improbable that it will also become a motive force so easily diffused, so perfectly tamed and deprived of the power to harm, and so valuable for use in larger or smaller degrees of energy, as to speedily revolutionize the systems of industry we have not yet ceased to admire as illustrations of vast improvement in the conditions of modern life.

The East is ever at work on a thousand schemes of a similar nature, using its discipline, its capital, its leisure, in testing combinations, inventions and plans whose success would be invaluable to mankind. The Atlantic Slope is the busy brain of the Anglo-American people. From the recesses of that brain the means and instruments for making the most of the great resources of the country in the shortest time have come. It is trained to act as Thinker and Guide. It has the liberality to think and act in the interest of all and with a successful prudence that has made it immensely rich in that process. It must, necessarily, long hold the pre-eminence its own abilities so thoughtfully employed have gained for it. Kindly, broad, and just, it has always substantially identified its interests with those of other sections so that they have no desire or occasion to reject its lead. New discoveries, greater and more beneficial improvements are to come from it in the future. Its career as a leader has, apparently, only begun.

We have now passed under review the whole region forming the body of the Republic from the Atlantic to the Pacific, from the possessions of England on the north to Spanish lands and waters on the south. There is no other such region on the earth, no people whose character and history and future have so much of which it has every reason to be proud. To say this is not to reproach any other country or people, or to imply that noble qualities are confined to these republicans. We shall see how valiantly and hopefully Canada is following a parallel path, and how vigorous and imperial are the qualities of the English stock at the present time. As these are in the closest relations with us a sketch of them is added as information and to show the parallel. Other nations have eminent specialties, but the consideration of them lies outside the view of this work.

To dwell so exclusively on the favorable features of this country and race may seem to imply an exaggerated appreciation of the past and present, and an optimistic view of the future. Evils and defects are assuredly very prominent in the minds of all who shall read what is here written and are not denied by the writer. Yet the great features of the past that have begotten a present so brilliant were accompanied by the same, or similar, often apparently greater, defects; but they were outgrown or disappeared in the natural course of events. They were not properly defects but limitations; not organic vice or folly, but rather excess of vitality—when they were not merely some misunderstood phases of growth.

The great facts of the past have been those of progress, never of decay; the great facts of the present are those of strength, not of weakness; and, when the future is outlined in the light of the past and present, there is all good reason to hope and none for any serious fear.

It is seldom that a nation, community, or individual can judge accurately as to what is really taking place. The view is too narrow; temporary circumstances in the present seem more important than they are—their nearness filling the horizon too much, and throwing everything out of proportion. This can only be corrected by taking measures to enlarge the view, and interpreting the present in the light of a carefully studied past. This attempt has here been made. The resources of the country, the character of the people and the line of progress have been noted to correct the natural misconceptions of the present and to furnish an augury of the future. The mariner would say that the view from the masthead showed how instinctive good seamanship had avoided rocks and shoals behind, and that a broad open sea spread before as far as eye could reach.

PART FIFTH.

CANADA AND ENGLAND.

In the previous portion of this work a survey has been taken of a Land, a People, and a Career which are fast rising to the foremost place in Modern History. At least, so it is believed by the citizens of the Republic; and the views that have been given of the geology and natural resources, the history and development of the United States of America do not tend to discourage this faith in the Manifest Destiny of Anglo-Americans to eventual leadership among the nations. Greatness appears written on almost every feature of the American future. Nature has stored the Land with resources as amply as History has endowed the People richly with qualities. The location in space between the two parts of the Old World reached by the Atlantic on the east and the Pacific on the west is as eminently favorable as the development in time; for the rising Spirit of the Age has breathed upon most nations, and they are awaking to respond to the enterprise of a vigorous race.

But America has many reasons for "remembering the rock whence she was hewed." If the Great Republic is an effect England is the cause. If her people were so worthy that, in taking a broad view of them, their defects appear insignificant compared with their virtues, it was because they had received a noble inheritance of high qualities from the Anglo-Saxon mother. If they found extraordinary agents to promote an extraordinary growth the agent—or the hint that led to it—was received from Great Britain, or encouragement there responded to every invention and every step of progress here. If the world broke out into rapid development and activities everywhere supplied stimulus and reward to American energy, it was because England had been the great Pioneer, sailed her ships on every sea, and established centers of thrifty modern industry in the most distant regions of the earth.

If America has covered herself with glory by her achievements, what shall we say of Great Britain, her immense commerce and wealth, her vast foreign possessions and the intelligent energy required for success in so many ways, in such a vast field, and with so crowded a base as her small home islands? America has yet far to go in many ways before she can outrank England, in a general average of comparison, and what may not England do in the meantime, with her powerful momentum of progress? If it is a race for the leadership of mankind, America is far from having caught up. She has boundless and various resources within her own territories, and is only beginning her harvest of them ; but England contrives to make the world her field, her prospectors unearth hidden treasures everywhere, and her armies and ships of war but protect her merchants and industries in securing the vast gains. "Brother Jonathan" may not yet rest content with his laurels, green and precious as they are. He will do well to meditate an advance to still greater triumphs in the near future if he means to continue gaining on "John Bull."

Great Britain has been somewhat remarkable in the last century for turning the successes of others—and even sometimes her own defeats—to her advantage. She has made a vast amount of money out of the loss of her Thirteen American Colonies by their greater and more massive development. Even her capital invested in independent America has gained her, a hundred times over, what was lost by the Revolutionary War. The Suez Canal, built by the French, falls into her hands along with virtual lordship over Egypt, and England gains much while Russia, the victor in battle, gains little by a Russo-Turkish war.

It is by no means certain that Canada will ever be disposed to merge her identity in that of the Republic, and it is not the assemblage of barren rocks, snow fields and frozen lakes the world has seemed inclined to believe. It may be safely said, probably, that the Dominion has one-half the number of acres of fertile soil possessed by the United States, and these are equal in economic value to the best lands in the Mississippi Basin. They were made such by the same causes, and if the winters are severe they are not really more hurtful than in the best developed and richest sections of the Northern States of the Union. On the Atlantic and Pacific the Dominion has some eminent advantages of commercial position and resources not fully paralleled in the Republic.

Meanwhile, a branch of the Anglo-Saxon race, with a specially educated graft from the fine Gallic stock, has had a special training there, is beginning to show the mettle of its ancestry, and an ambition and courage of adventure such as Anglo-Americans admire when exhibited among themselves Canada and its people are rising to prominence and should be understood by Americans. A few chapters are, therefore, given to Canada and England by way of contrast and comparison with the United States.

THE DOMINION OF CANADA.

CHAPTER I.

THE PEOPLE AND THE GOVERNMENT.

A settlement was effected by the French in Canada a few years earlier than by the English in Virginia; but a full generation passed before it had struck so firm a root as to give some assurance of permanence. To secure this result all the talents, energy and influence of the excellent Champlain had to be employed for thirty years; and even then a large part of its supplies depended on the mother country. The soil was rich, but was long quite uncultivated. The policy followed by its promoters and rulers gave little encouragement to such of the settlers as were not noble or not associated with the trading monopolies. In the sixteenth and part of the seventeenth centuries France was passing through a religious conflict between the Roman Catholics and the Huguenots. The latter were conquered and multitudes of them fled from the country, but were not permitted to settle in Canada. Later, the ambition of Louis XIV. kept France in a state of war with a considerable part of Europe, for a long time, so that its colonies received comparatively little attention.

Yet care was taken to plant French institutions and to preserve government control over business and development in every direction. The English colonies further south were inaugurated under charters that were liberality itself compared with those of the French. The English were led by parties who were themselves settlers, and the mass of the settlers were allowed a voice in shaping many of the affairs that most deeply concerned them. Add to this that the English Government treated them in many important respects with a wholesome forgetfulness and neglect that permitted a natural growth in accordance with their character and surroundings, and a sufficient number of reasons are found for the immediate establishment of strong English colonies and the long feebleness of Canada.

In 1663, sixty years after the first landing of DeMont's colony in Nova Scotia, Canada had but 3,000 settlers. New England alone, at this time, had probably as many as 60,000 who had established a firm foundation for future prosperity. At this time Louis XIV. took Canada under his special royal protection and endeavored to build it up on a stronger base. He encouraged immigration and introduced the Feudal System in order to promote agriculture under military protection. The fur trade had been the principal interest hitherto. This had not encouraged immigration, to any important extent, and the few colonists had maintained their prestige by cultivating the good will of the tribes in their own boundaries and fighting the Iroquois of New York with great vigor when they became aggressive—which was often the case. They required to be constantly ready to defend themselves.

After trading interests—perhaps it should be said above them—was the religious character of the colony. For nearly three quarters of a century—perhaps even longer—the colony was a mission much more than anything else. The influence of the priests over the Indians contributed much more to the protection of the feeble settlements than the small military force sent from France. The Jesuits entered the field with ardor and the self-devotion of martyrs. Many of them, during the first fifty years, actually became martyrs —unflinchingly gave themselves to torture, or death in the midst of their converts. Such an example of enterprising fortitude was not without its effect in quickening the daring boldness of those who were not at all religious, and it deepened the religious tone of the settlers generally very much. No people in the world have given evidence of more attachment to the Roman Catholic Church than the French of Canada; and it may also be said that nowhere have the religious teachers of that church--the higher as well as the common priesthood—proved themselves more earnest in devotion to their spiritual work than in Canada.

Thus the training of the French pioneers was absolutely different from that of the English in the south. The few thousands who formed the nucleus of the colony sixty years after its origin—when they received a considerable addition to their numbers—were trained to hardship, danger and endurance. A part of them spent half of each year in roaming the woods after furs and game and conducting trade with the Indians. This free, wild life neutralized some of the ill effects of the unwise system of government established over them and made the Mississippi Valley, and the Northwest, as far as the Rocky Mountains, familiar ground to them.

Not more than 10,000 natives of France ever immigrated for permanent settlement in Canada—and some maintain that there were no more than half that number, or 5,000. In a hundred years—in 1760, or at the English Conquest—they numbered 60,000. Their descendants during this period settled in moderate numbers in Michigan, at Detroit and Mackinaw, a few at Green Bay, Wisconsin, in Illinois, Indiana and the Lower Mississippi. The mass of them remained in the valley of the St. Lawrence and quietly gave themselves to agriculture and the few lines of occupation which the small towns afforded.

The most of those who remained after the English occupation were country people, subject to their feudal lords. Until almost the close of the seventeenth century they were ever on the watch for Indian attacks. and the frequent wars with the English colonists called them into the field for many years afterward. Hardy and bold as soldiers, this handful of Frenchmen kept the growing multitudes of the Anglo-Americans, who soon began to increase to millions, in almost constant uneasiness and alarm. They were kind and politic in their management of the Indians and gave the French name as much currency and prestige in America as Louis XIV. and Napoleon Bonaparte gave it, during the lifetime of each, in Europe. These few, poor, unambitious settlers did not discredit their ancestry when called upon to act, and nearly three millions of valiant Anglo-Americans breathed freer and felt their interests more safe when the rule of sixty thousand French colonists in Canada terminated.

The French peasantry—or "habitans," as they were called—who formed the principal base of French power in Canada, when not engaged in military operations were as quiet, careless and unambitious as could well be conceived. The government Land, or Feudal System, did not offer much encouragement to farming enterprise, markets were extremely limited, and there were few opportunities for gaining wealth open to any who did not possess influence with the Government—and few but the noble had that. In fact, most of the French who amassed wealth in the Canadas were natives of France, in favor at Court, or who could secure interest there. Ordinary native Canadians could exert no influence on the government or public affairs about them, and they rarely were able to secure more than a modest competence. All the stimulus that was so powerfully felt by even the lowest classes in the English colonies was wanting. Unless an Indian or colonial war called them away from the uneventful and unexciting round of daily duties they had small occasion for fore-thought or anxious meditation about current affairs. Extremely social and devout, they labored during the short summers with diligence to secure their small harvests and spent the long winters in social enjoyments and careful attendance on the services of the church.

In September, 1759, Quebec was captured by the English army under Gen. Wolf, and in the same month one year later Gen. Amherst took possession of Montreal, the capitulation on the last occasion including all the French forces in Canada. In 1763 a definite treaty between France and England secured all the French claims to territory east of the Mississippi to England.

With this event commenced a new career for Canada. It was a great affliction for the French population, for they had not resented their exclusion from the public affairs of their colony, nor the illiberality that left them so few opportunities for gaining wealth. They had cheerfully answered all calls for military service, although they received little pay, and sometimes none, while their fields must be cultivated by the women or lie fallow in their absence. They had the warmest attachment to France, and did not share in that growing discontent of the French peasantry at home with the court and nobility that were, in a few years, to bring the fearful Revolution and the "Reign of Terror." To them the king was all that was paternal and kind, and the court and nobility were surrounded in their thought with a halo of honor and glory. Although shut out from the opportunities of improving their fortunes that were so fully enjoyed by all classes of the Anglo-American Colonies, they were freed, in this boundless New World of unoccupied land, from the want and misery that afflicted their class in France. They had few disturbing ambitions and many simple pleasures. They were content with the king and the priests, who took some care that they were not wantonly oppressed by their feudal lords and the officials of the colonial government.

When the conquest of the French armies at Quebec and Montreal took place, the "habitans," who formed the principal part of them, were dismissed to homes from which long absence had banished the accustomed comforts, and with the total loss of pay for vast quantities of provisions which they had supplied to the armies during the years of war. They fell under the sway of a people whose ways and language were strange to them. Their regrets were very bitter. They never lost their fond affection for France, their attachment to their church and priests or to their language from their loyal hearts and memories. But resistance would have been hopeless had it occurred to them; their priests were wise and useful in mediating between them and the conquerors, and, after a few years under the rule of the English, a new prosperity gradually opened to them.

As discontent, rebellion, war, and finally independence came to the Thirteen English Colonies south of them, the English Home Government treated its French subjects with more and more careful consideration. They were protected from the eager self-seeking of the English settlers who immigrated to better their fortunes ; their religion, their language, and their civil laws were respected; after a time they were invited to take part in the councils of the colonial government, by elected representatives or a Colonial Assembly, and gradually learned to claim and to maintain the rights of Englishmen which the Conquest had acquired to them. From 1792 to 1816 Lower Canada was substantially governed in the interest of the French inhabitants, somewhat to the discontent of the English settlers who came in after the Conquest.

By that time they had learned to understand legislative forms and rights, and were not as content to pass laws which might be negatived by the Governor, or disallowed by the English Colonial Office as the English colonists themselves. They entered on a long and bitter parliamentary contest for the right to control the expenditure of the moneys they voted, and finally exhibited the thoroughness of the French character, which had seemed to lay dormant in the habitans under French rule, by passing from opposition to rebellion. Such a climax was reached in 1837. This, however, was so little the wish of the mass of the people as to yield very soon to

English vigor, followed by English good sense and wise concession. The point they contended for was admitted, and Parliamentary Government was allowed them.

Early in the eighteenth century the English had gained possession of the islands in the Gulf of St. Lawrence, and of the peninsula the French had settled and called Acadia and the English Nova Scotia. Most of the French inhabitants had been forcibly removed or expelled from Acadia, because of their attachment to their Mother Country and French institutions and the supposed danger they formed for the new rule, and many thousands of emigrants from the British isles had taken their places or built up new settlements. At the close of the American War some thousands of royalists of the Thirteen Colonies, now free, who had taken the side of the mother country in the contest, were given lands in New Brunswick and Upper Canada, and two new and thoroughly English colonies had thus been formed. Upper Canada was found to have a fine soil and climate, and attracted a considerable emigration from England, Scotland and Ireland. In 1792 they obtained a separate government in order to avoid causes of dispute and ill feeling between the two nationalities.

In 1840, although the English Government granted the points in dispute to the French Legislative Assembly, it punished them and provided against possible future rebellion by joining Upper, or English-speaking Canada with the Lower, or French Province, in a legislative union. This was not wholly satisfactory to either Province. The French were the more numerous, yet the two Provinces had an equal representation, and the French Province was required to share the pecuniary burdens of the less populous and poorer Upper Province. This, however, was but a subordinate and, as it proved, a temporary trouble. The important point was that complete control of their home affairs was given them. They were free to devise, arrange, control, and grow at their best without interference.

A period of rapid progress was now inaugurated. Lower Canada had been settled more than two hundred and thirty years, while Upper Canada had been almost a wilderness fifty years previously. The Lower Province had about 700,000 inhabitants, and the Upper little more than half as many. Settlements on the lower St. Lawrence were comparatively compact, all within a moderate distance of the great river, which had no serious obstructions to Montreal on the western boundary. Although Upper Canada had the most favorable soil and climate, and its settlements were spread along the extensive water line of the upper St. Lawrence and the Lower Great Lakes, its navigable outlet was wholly interrupted between Lakes Erie and Ontario by the cataract of Niagara, and was made difficult and dangerous by the rapids of the St. Lawrence above Montreal. Its products reached suitable markets, therefore, with difficulty and considerable expense.

The conditions of the Union of the two Provinces were designedly made most favorable to the upper one. The aim was to Anglicize the French inhabitants by giving as much preponderance as possible to the English portion of the people; for the recent attempt at rebellion had inspired distrust of the French element. The latter remonstrated without effect, but having, in the more important points, received what they sought, they quietly submitted and devoted themselves to a careful development of their opportunities. The English-speaking people were the descendants of the American Loyalists and immigrants from England, Scotland and Ireland. There were large numbers of the thrifty Scotch and their co-religionists and relatives by blood from the North of Ireland, who were a most valuable class of people in a new country. The Anglo-Saxon and the Celt had quarreled and fought with great bitterness from the opening of modern history in Europe, even when separated by branches of the sea. Here they were brought together to share in the conduct of the same government at the polls, in the legislative chamber, in the executive council.

Freedom of action and community of individual interest enabled them to lay aside, for the most part, the differences which race, religion and mutual prejudice had so long fostered. They joined hands heartily to inaugurate the new independence granted to them. Their privileges and liberties were, in effect, even greater than those of British subjects in England itself. Although their Governor was appointed by the Executive of the Home Country he had no arbitrary power. The people elected their Representatives with entire freedom, and the members of the Executive Councils could carry on the Government no longer than they were in harmony with these Legislators. The Colonial Parliament made the laws, laid the taxes, supervised all expenditures, and held complete control over public affairs.

Their Fundamental Law, or Constitution, was not indeed formally of their own making, being an enactment of the Parliament of Great Britain; they formed a portion of the British Empire; the Governor General was the Representative of the English Sovereign; and they did not assume the formal attributes of an independent nation. Virtually, however, the Constitution was such as they generally desired; the Queen, by her Home Parliament and Colonial Viceroy, was merely a moderator in their deliberations, did not attempt to embarrass or often interfere with the course of public affairs, and her Parliament acted as umpire and a final court of appeal only when invited to do so, or in specified cases involving the interests of the whole British Empire, those of Canada included. The advantages of remaining nominally the subjects of a distant Sovereign, subordinate parts of a great whole, with actual self-control, were considered greater than the disadvantages; for the sovereign powers were chiefly ceremonial and moderative, and administered with the dignity, consideration and good sense peculiarly the attribute of the Anglo-Saxon race when precedent and the authority of law have rendered the subject virtually free.

The forms of the Canadian Government and the exercise of authority by appointed officers were borrowed from the latest and most enlightened usages of the English people and had, therefore, much of the ease, maturity and fore-thought of an old government. If their detractors thought they fitted loosely and awkwardly on the stalwart and rustic limbs of a young backwoods nation they could not deny that they worked without the friction which modern institutions newly established in the midst of an old society experienced, and nothing prevented such modifications as the future might prove desirable.

This Union of the two Canadian Provinces, on the upper and lower St. Lawrence, lasted for twenty-seven years. Entering it with about 1,000,000 inhabitants, the expiration of this time found them with considerably over 2,000,000, who had succeeded admirably, on the whole, in managing their own affairs. The French and English statesmen worked so well and harmoniously together that one might almost have supposed them to be of one race. The French proved themselves as capable of management, of guiding public affairs within constitutional limits, as their English associates, and progress went forward among the French population in the same degree, considering that their Province was so old and the habits of the communities so thoroughly stereotyped in the cast of ancient molds. The habitans had been accustomed to look to their priesthood for initiatory steps, and by race and immemorial habit had been believed wanting in the individual boldness and promptness that distinguished the Anglo-Americans in the highest degree, and strongly marked the British settlers of the Upper Province. Upper Canada naturally took and kept the lead in inaugurating the improved organizations of the most modern society; but if Lower Canada followed in the rear it was not far behind after making due allowance for the difference of circumstances and history.

But Upper Canada was very enlightened and enterprising in some ways that were most important. She received, among the immigrants from England, some of its most enlightened and progressive citizens. She was almost surrounded by several of the intelligent and aspiring commonwealths of the Anglo-American Republic and her own high-minded leaders determined that their institutions should be after the best models and shaped after full study of the most mature experiences of the leading States of Europe and America. The monarchical structure and parliamentary form of government in Canada have one singular advantage, at least —they provide that the initiative in legislation shall be taken by the highest officers of the Executive to whom the conduct of public affairs for the time being is committed, viz.: the Cabinet. This small body of eminent statesmen necessarily has a broader and closer view of the needs of the country than any other class of men, however enlightened, since they have to deal with all the details of affairs in every part of the country at once.

To this body is committed the care of planning, introducing, and pushing through, by their leadership and exceptional influence, the whole system of legislation they deem important for the time. The President of the United States and his Secretaries form a cabinet, but it is, above all, executive. They may suggest legislation, and even urge it, but are not expected to originate the general scheme for it, nor are they allowed to guide it through the legislative chambers with the force and influence that union and responsibility to the legislators and the people confer. There is no organized body under the Constitution required to devise, mature, and carry to success a system of measures that may be needed. Legislation, therefore, is more irregular, desultory and incomplete, because spontaneous or arranged by comparatively irresponsible party leaders or individuals, who may, possibly, waste the time of Congress on immature or perhaps extravagant projects.

With this well-organized leadership more vigor, definiteness and completeness is likely to characterize legislation. The Canadas labored under many more disadvantages than the Republic when, in 1840, they received such an organization—Parliamentary Government it is called—and their great progress subsequently, notwithstanding serious embarrassments, is partly explained by the vigor and unity of the system. Leadership is more carefully provided for, more direct and effective under this monarchical but free structure of Government than in one purely and simply popular and having a more complete separation of Executive and Legislature, as in the United States. There is, perhaps, a superabundance of leadership in the more entirely popular system, and it tends to develop talent in that line; but more ability and skill are often less effective for want of accepted and constitutional organization. They are partly wasted and diminished in usefulness to broad and high public interests because required to spend so much strength in contest with rival aspirants.

The Canadas soon united in a great system of public works. Some seventeen hundred miles of navigation extending from the Gulf of the St. Lawrence to the extremity of Lake Superior had been but partially available from obstructions in the river and between the Lakes. Ship-canals were constructed and this embarrassment overcome. Roads were made in all directions; public aid came to the help of towns and municipalities in laying foundations in the wilderness, and flourishing cities grew up rapidly. Resources, in a country so vast, so new, and that must long be thinly settled because the mass of emigrants from Europe to the New World flowed mainly to the better known and more famous republic, were very limited; but when the new Government had become well organized, and the country completely pacified, the credit of Canada became good in England. Large loans were effected for purposes of development. An intelligent study of the best institutions of the most prosperous nations was made by public agents of the two Provinces, and the organization of municipalities, of public schools, of charitable and reformatory institutions was made thoroughly admirable. Immigration was aided, the public lands were thrown open, companies for promoting settlement were encouraged, and development in every line was stimulated.

Soon after 1850, the Feudal Tenures of French Canada, that had been preserved for nearly two hundred years, were extinguished. The educational system of that Province was greatly extended and improved, the commerce and trade of the two Canadas was largely developed, and a measured, well-regulated, healthy, yet rapid and powerful progress became apparent in every department of growth. The changes in the Lower and older Province were steady and great, yet slow compared with Upper Canada, which, during this period, or from 1840 to 1860, kept pace in most respects with the neighboring States of the American Union. Railways and telegraphs made their appearance, and continued to assist growth very much after 1850.

Nova Scotia, New Brunswick, Prince Edwards Island and Newfoundland were called the "Maritime Provinces," and were independent of each other and of the United Canadas. The only common bond was that maintained through common relations to the Mother Country. Each of these had received the same practical self-government as the Canadas about the same time, and had a ministry responsible to its local Parliament, which, in all essential respects, governed the people according to their will.

About 1860 growth had proceeded so far as to demand new facilities and some re-adjustments. Intercourse by water by the improved channels with the outside world could be maintained only in the warmer months of the year and had become too slow, the distances being so great. To maintain its rate of growth railroads must pervade the country as they were coming to do in the neighboring Republic. The Maritime Provinces needed the markets of the Canadas for their commerce, as did the latter the outlet for their productions, which some kind of close union with each other alone could give. Their united resources and credit would be none too much for the construction of railways and other facilities of a massive and thorough expansion. In addition to this, legislative embarrassments arose out of the union of the two Provinces, so dissimilar in character and interests, and now so changed relatively from their condition at the period of the Union. That union had been unnatural—the effort of the Home Government to Anglicize the French Province through association with the English Province. It had its good results but seemed to have been really unnecessary, as virtual independence completely reconciled it to English relations without necessary loss of its inherited language and habits of thought. Progress readily took on a French type without loss of memories and customs dear to the people.

From 1857 to 1865 the government of the United Provinces was almost continually threatened with a dead-lock in the Canadian Parliament, so equally balanced were representatives of the two sections, and so difficult was it to agree on a common scheme of public policy for the whole. It was evidently necessary either to reconstruct the Union to conform to the different circumstances, or to arrange a legislative separation and a Federal Union. The representatives of the two sections could not agree on the first; they therefore undertook to ascertain the possibilities of the last. The Maritime Provinces had already begun to consider if their interests would not be promoted by some kind of federal union among themselves. Canadian statesmen invited them to entertain the idea of a larger union. After several years of discussion and deliberation by the cabinets, legislatures and people of the several Provinces, and of consultation with the English Government, a plan of Confederation was agreed upon. This obtained the authority of a Constitution, after having been accepted by the Imperial Parliament, and received the royal signature in 1867.

The legislative union of Upper and Lower Canada was now dissolved, the Upper Province receiving the name of Ontario and the Lower that of Quebec. Each of the Provinces preserved its separate provincial organization and government and a Central or Federal Government and Parliament were constituted. The head of this Government was a Governor General representing the British Sovereign; a Cabinet of thirteen Ministers formed the Executive, wielding the powers of the crown in the name of the viceroy, or Governor General, who, like the Sovereign in England, could only exercise authority through the ministry. This ministry was responsible to the Federal Parliament, composed of a Senate appointed for life by the crown—that is to say, by the Governor General under the advice of the ministry, or Council, as the executive Cabinet is sometimes called—and of Representatives elected by the people of each Province for five years. The body of Representatives composed the House of Commons; and the number, both of Senators and Commoners, from each Province was defined by the Constitution, called the "North America Act." The whole country, so embodied, was called "The Dominion of Canada." Representation in the Dominion and Provincial Parliaments was arranged according to the relative number of the population.

The relations formerly existing between the separate Provincial Governments and that of Great Britain were now transferred to that of the Dominion; Provincial Governors—they were now named Lieutenant-Governors—being appointed by the Dominion Government—by the "Governor in Council," as the usual formula expressed it. The Confederation of the several Provinces was similar to that of the States of the American Union, but the general manner of conducting the Government was closely modeled on that of England. Centralized and well organized for vigorous action, it was made completely dependent on public opinion, as expressed by Representatives elected by the People. Almost the only disadvantage of such a structure of the Executive arises from its habit of leading in almost all important enterprises. In a more democratic structure—in the United States, at least—the executive is confined much more strictly to the work of putting the laws in force.

Under the first system the Government is looked to for leadership in all improvements for the advantage of any considerable section of the country or class of the people; under the last the people themselves initiate measures, and, as far as possible, conduct them without reference to the Government, unless they are of such a nature that those originating them could not reap the profit. Each system has its advantages and disadvantages. An executive to plan and guide legislation seems better for a country like Canada—so vast and slightly developed. An American is accustomed to believe that the less his General Government has to do with business interests that are capable of being conducted by business combinations and classes the better, and it is no doubt true for a country so populous and rich, and whose citizens are so enterprising. The habit of self-dependence is a good one, and possibly that may make the chief difference in the two systems in the long run. The people of the Republic have practiced it from the start and prospered exceedingly. The opposite habit may not be so favorable to Canada when it gains fuller command of its resources; yet, in future practice, it may be so managed as to avoid serious disadvantages.

At first, the Confederation included only Ontario, Quebec, New Brunswick and Nova Scotia. In a few years negotiations through the British Government with the Hudson's Bay Company transferred to the Dominion its proprietary rights over the vast central and northern regions of British America outside the then Dominion. In this region Manitoba was erected into a Province and the Northwest Territories were organized. Prince Edward's Island soon came into the Confederation and also British Columbia, comprising the Rocky Mountain Plateau, the Pacific Coast and Islands. It was expected that, in the end, Newfoundland would see proper to join the Dominion and, in time, many distinct Provinces are expected to be constructed in the vast central regions east of the mountains.

This union was inspired and effected not only by economic considerations but by many others having relation to politics and hopes in regard to the future. Had there been no serious differences of sympathy and national feeling the natural relations of the different sections of the Dominion would, perhaps, have tended to lead them to desire a political union with the adjoining Republic. There were, however, many reasons why this did not occur and may never be felt desirable by the Canadians. Differences of race and religion have been tolerably arranged between the French and English-speaking Provinces and inhabitants by the consideration given by the English Government to the French language and customs and the Roman Catholic religion. The latter was respected and protected by the State. In the American Union it would be difficult to support the guards now thrown around it. The English Provinces have been chiefly settled by immigrants from the British Isles since the great changes in the Constitution of England have made it nearly the most liberal of republics, under the forms of a monarchy, and placed it at the very head of modern political progress. In a new country like Canada those forms contribute to vigor and success, politically and materially, and many of the difficulties still remaining in England itself are left behind by the immigrants. The principal embarrassments of a thousand years of past history are not transplanted.

For these and many kindred reasons they remain strongly attached to the monarchical forms that have been so ingeniously adapted to assist the execution of the popular will. They admire this system and think they find in it important advantages over that of the United States. Their executive changes necessarily respond to changes in public opinion without hesitation. The friction between an administration unchangeable but at fixed times and the popular desires, which may sometimes be seen in the Republic, is not experienced by them. The Republic does very well with such a system because it is fairly adapted to the genius of the people. But it repels the British Canadian.

The Anglo-American, as disciplined in the United States for two hundred and fifty years, has acquired the marked features of character that distinguish a nation. The Anglo-Canadian has been under discipline for a shorter time, but the great changes in English colonial policy, of which the conquest of independence by the Thirteen Colonies was the occasion, required the emigrants to Canada to lay aside comparatively few of the memories, habits and prepossessions brought from Europe. The larger space and opportunities around the individual, the community and business enterprises, the great change in climate and in habits, tend, in many ways, to form a new nation, but on a considerably different model from that of the Anglo-American. They are in much closer harmony with modern England and modern Europe than Americans can be, and are daily receiving the most modern of Europeans and the most inteligent and pronounced of Englishmen as component portions of their people. These are intelligent and sensible enough to harmonize themselves readily with whatever they find new and strange, and usually they find these differences, in the aggregate, desirable and in harmony with the tendency of liberal English thought and aspiration. They could not so readily accommodate themselves to the tone of American thought when not forced into the American mould by the society around them. The United States is a nation; it takes long and severe experiences to form one on a really new model. Canada is a New England in a very decisive sense. It has developed so strong a tendency toward a distinct nationality with a strong French leaven in it, that it will not be easy to turn that tendency aside into really Anglo-American channels.

The definite establishment of the Dominion, the approaching union of all its sections by railways, the great resources that will make the Confederation prosperous, strong and respected seem likely to counterbalance any tendencies of interest for the time being to lead them towards a political union with the American Republic. That people has enough on its hands in territory and resources yet undeveloped to employ its utmost of time and thought for generations, and tends, besides, to expand southward rather than northward. It is not now, at least, aggressive in temper or policy, and is likely soon to find much advantage in an increasing reciprocity of trade and free business intercourse with the forest regions of Canada. Such a harmonizing of interests is more probably the tendency of development, as now in progress in both countries, than political union. It would leave freer scope to the institutions, habits and strong elements of character that diverge widely now, and seem to incline to do so yet more in the future.

In addition England is unlikely to desire such a result in any near future, and there is so much sympathy between England and her colonies, they are so liberally treated by the Mother Country, so much assisted by her wealth, and so protected by her power, that Canada would scarcely desire to break all these bonds against the will of that Government. The greatest obstacles to growth have been overcome by the acquisition of the central valley of the north and the Pacific Slope and the great advance toward the commercial union of all sections by railroads. Had these western sections, and especially the central prolongation of the Mississippi Valley, been settled before the Union and before railroad development had become so advanced, there might have been a stronger tendency to intimate relations with the United States; but the Union was consummated between the four stronger Provinces before the trans-continental railway had been completed from the Missouri River to California; that connection of the East and the West opened the mountain Territories, the mines and the Pacific Coast of the United States to ready and rapid development, and a new era of settlement and progress began in the Republic. Neither the Government nor the people of that eager and prosperous country coveted British America. In fact, they regarded it as part of England, did not comprehend its great future and treated it very cooly, partly for England's sake, and partly because it had been understood that it desired the success of the South in the Civil War.

Had the desire to smooth the way to its entrance into political union with the Republic inspired the Government it would not have terminated reciprocity of trade soon after the close of the war. The cultivation of intimate business relations might have terminated some day in common sympathies so strong as to have paved the way to such an event. The opposite course was taken. Canada was driven to depend more on English aid, and the national spirit of Canada was called into livelier action. Its railroad system was completed from the Atlantic coast to the Upper Lakes; the Canada Pacific railway was begun, and the foundations of a vast development were laid in the Red River Valley of the North by the organization of Manitoba. Canada was beginning a great career on its own account.

That career is yet scarcely started. The overflowing abundance of the prairie States, the mines of the West and the rich lands of the Pacific States, together with a vast system of cheap transportation enabled the fertile Republic to supply whatever the markets of the world would take. Canada could not compete because of long distances and imperfect organization of transportation facilities, and her business languished. Her turn has not yet come, and she has still many trials and struggles before her. These troubles will, however, harden, discipline and unite her people. Want of sympathy on the side of the Republic will attach them more and more to their own opening nationality. Business interests between them and the people of the States lying near them will multiply and enlarge, and interest will finally bring the United States Government to desire to free commercial intercourse from embarrassments as much as may be. The growing national sentiment of Canadians and the influence of England are likely to prevent a political union, so far as present tendencies furnish the hints for forecasting.

The two peoples are worthy of their sturdy, sensible, valiant Anglo-Saxon ancestry, and that common ancestry will always form a bond between them. Language, institutions, habits, character, have sprung from the British Isles and made them kin. A community of possession and interest in the chain of Great Lakes, in the rich agricultural resources of the Central Valley of the continent and on the shores of either ocean, will unite and commingle their interests in a thousand ways. These will all tend to produce that kind and degree of union necessary for the highest prosperity of each. Local institutions and preferences are probably strong enough to prevent political annexation since no very important end will be gained by that if free trade or an approximation to it is otherwise secured. It matters little if mutual prosperity and good will are fully provided for.

CHAPTER II.

THE RESOURCES OF THE DOMINION.

The northern part of North America is the oldest part. The first land was made here when Geological Time—so far as the present structure of the earth as we know it is concerned—was very young indeed. We have seen that this continent was composed of two arms that extended from Lake Superior northeast to Labrador and northwest toward the Arctic Ocean. The oldest ranges of elevations were produced, apparently, through the whole length of these two arms. Many geologists believe that these low ranges of mountains were the first that were anywhere raised on the surface of the earth.

The study of high northern latitudes is very difficult from the extreme cold that reigns there and the deep covering of snow and ice that is spread over the rocks, hills, valleys and plains during much of the year. Yet great and heroic efforts have been almost continually made, by various governments and by scientific men, to become acquainted with these regions. Their geological structure is now fairly well known and the rocks tell a singular story. They have not always been subject to the rigors of cold that now reign there. Until comparatively recent geological times they had a mild and, much of the time, a tropical climate. During the Coal Making Age the same tropical vegetation that we have seen produce the coal beds of the Mississippi Valley and the Alleghanies grew in the Arctic regions in apparently equal profusion. It is certain that vast beds of coal were formed there, equal in quality to any in the world, so far as observation has been able to determine. In fact up to the close of Palæozoic Time or to that of the first great mountain making period that followed it, a tropical temperature seems to have reigned over all regions and, apparently, between that period of elevation and the still greater one that raised the Rocky Mountains and other vast ranges and extensive plateaus, a temperate climate was generally, if not constantly, maintained. This time reaches down nearly to the Glacial Epoch, or Great Ice Age. This would cover the Mesozoic and part of the Cenozoic Times. It is probable, then, that the Arctic regions, in both the New and the Old Worlds, became intensely frigid only in comparatively recent times. Some suppose that at intervals, from the beginning of rock making time, the relations of the earth and the sun have become such as to produce intense cold, at least in the polar regions. This is an astronomical theory to account for the Glacial Era, traces of which are everywhere found—in northern and temperate regions, at least—but is not yet definitely confirmed—or proved—by Geology. The periods of intense, long-continued cold whose traces are unmistakable seem confined chiefly to times later than the definite raising of high mountains and broad plateaus. Changes of level certainly occurred immediately before and after the Age, or Ages, of Ice which have done so much to improve the agricultural value of the surface of the earth; but these were mere oscillations in which submersions beneath the waters were followed by a return to the original position, or very nearly so. The astronomical theory of the frequent recurrence of Glacial Epochs may hereafter be confirmed but does not, as yet, seem to accord with observations of this kind.

This former tropical and temperate climate of the now frozen North, together with the well-proved fact that land first appeared in the northern parts of the continents and was gradually extended southward, has led some to suppose that the northern regions were first made habitable for man and that he made his earliest appearance there. The rocks of British America—the old Laurentian Continent as it is called

—are the oldest of all known rocks and thirty thousand feet —nearly six miles—in thickness. The Primal or Azoic rocks are here developed more perfectly and extensively than any where else in the world. Some geologists suppose that they received later deposits in the Palæozoic and Mesozoic Times, which were graded down and washed away afterwards by atmospheric influences and the great Ice Floe, or Glacier, to form the rocks so extensively laid in the waters at the south. It does not, however, appear certain that they were ever wholly sunk beneath the sea after their first elevation.

Remains of plants and animals that can live only in a warm climate are found in the rocks of the extreme frozen north wherever the geologist has been able to make careful explorations, and it is thought by some that they made their first appearance somewhere in the Dominion of Canada, Alaska, Greenland or adjacent regions, and spread, by pathways that have since disappeared, to Europe on one side and Asia on the other. The frequent succession of plants in Europe in periods following their appearance here seems to confirm this conjecture. More recently it has been suggested that the first appearance of man was here, and that the primitive tribes peopled the other continents from this. Study is not sufficiently mature to confirm or disprove these suggestions. There are some things tending to favor them quite strongly but it is too early to venture a definite opinion.

Those who have not studied the subject are apt to imagine that Canada is too cold, barren and inhospitable to be of much value for the residence of large numbers of the human race. The fertile soil and moderate climate of the United States are supposed to include the most of the northern parts of the continent that may be lived in with comfort, and are permanently productive. This, however, is a great mistake. The attention of the world, and especially of the Anglo-American, has been so occupied and monopolized by the spectacle of the extraordinary growth and vast wealth of the Republic that little notice has been taken of other regions. It has been wrongly inferred that, since they were less prominent for the time in the public eye, they had few attractions and advantages. The northern latitude and many graphic descriptions by travelers of some of the wilder and ruder regions has conveyed the idea that British America, generally, was desolate and practically uninhabitable, or quite unfit for promoting the prosperity of a large population. Some of the northern regions of the United States belong to the Azoic areas and are of little agricultural value. In popular apprehension these sterile regions were supposed to be representative of the further north, generally, and so have prejudiced still more regions that have really the fertility and value of central New York, or Ohio, or even the northern prairies of the Mississippi Valley.

In fact Canada has an extremely large quantity of land furnished with a deep, soft, rich soil from the same sources that provided the most fertile elements of the Great Valley itself, while beneath this lie wide-spread rocks of limestone, sandstone, marl and shales formed at the same time and in same way as in the most fertile parts of the Valley south and west of the Great Lakes. It is true that a large part of the surface of the Dominion is too cold and sterile for profitable agricultural uses, but much of this has a value for other purposes. The whole of the Dominion is nearly as large as the United States, leaving out Alaska; and it may be considered that the fertile parts of it, from the Atlantic to the Pacific, that may be employed profitably in agriculture aggregate about 1,200,000 square miles—or about the same surface as the immediate basin of the Mississippi and its tributaries. Of this only two-thirds is, according to some, fairly proved to be arable, with a climate suitable for successful farming. This, however, is quite as likely to be a mistake as the former notion that the "Plains" were a desert, beyond the one-hundredth meridian. The forest-producing regions—those which may sooner or later become valuable as sources of income—amount to about 500,000 square miles. Part of this grows on fertile land, but the larger part is rough, on mountain slopes, or in regions having a climate too severe for a dense population.

The three most important periods of mountain elevation nearly correspond with the beginning of the three great divisions of geological time—the Palæozoic, the Mesozoic and the Cenozoic. These elevations probably had a determining effect so decisive on the progressive development of rock and continent-making, on the temperature and constitution of both air and water, and introduced so many modifications that the whole condition of things was changed, and a new Era opened. At, or near, the commencement of the Palæozoic Age the Laurentides, or Laurentian hills of Canada, were raised. It was primary, or Azoic, rock that was so raised; and this rock was 30,000 feet in thickness. It had been formed in the waters while the crust of the earth was so thin as to be extremely hot, and the rock was very much changed. It is called "metamorphic," which means that the minerals in the rock had been crystallized by the heat after they had been deposited in the water, and that the traces of stratification had nearly disappeared. They were baked and hardened, somewhat as we see in clay when it is made into blocks and subjected to intense heat in a furnace. It comes out as brick.

These rocks do not readily dissolve into the fine dust necessary to make soil, and the regions where they are found on the surface are always poor for agriculture. They cover an immense area in Canada. They hold water well, wherever there are depressions, and are generally remarkable for a great number of lakes on the surface which they underlie. British America has an immense number of these lakes. The chain of Great Lakes between the Dominion of Canada and the United States was formed by depressions in this hard, primitive metamorphic rock, and along the western line of development of these rocks northwest of Lake Superior to the Arctic Ocean there is a long string of them—many being large. This rock lays nearer the surface in Wisconsin and Minnesota than elsewhere in the United States, which accounts, in large part, for their lake regions. However fertile the surface the rocks beneath are not porous but hard and firm and hold the water that finds its way to depressions—or small basins—in them. Yet, over various parts of these hard baked rocks in the Dominion the ice floe of the Glacial Epoch spread much finely ground material and thereby supplied all the elements of fertility, as was the case in much of Wisconsin and Minnesota.

But, besides this "Drift" from the moving ice, some parts of the Dominion were under water during the latest rock-making times before, and also after the Glacial Period, and so received a coating of the softer and richer rocks, and the Drift was so well distributed as to furnish the Dominion with much excellent soil. This was especially the case with the central trough of the continent, or the northern continuation of the Mississippi Valley between the Laurentian elevation west of Hudson Bay and the Rocky Mountains. Manitoba, and the Northwest Territories—which last extend as far north as the summer is long enough for agriculture, that is, to the fifty-sixth degree of north latitude above the valley of the Peace River—lie in this central trough. It remained under the waters as a wide strait until the Rocky Mountains were permanently raised. The formation is the same as in Kansas and Nebraska, only it was not washed and worn away so much in the slow process of being raised. The "Plains" west of the Missouri River had the open Valley in front and the Missouri and Mississippi Rivers to carry off the surface mud. In British America the mountains closed in this trough on either side. It did not wash very heavily. The ice carried some of the surface before it over the watershed of the Mississippi and Missouri, but the amount was apparently small compared with what was washed away from the surface of the plains.

That there is a great depth of drift and soft rock here is shown by the remarkable depths of the channels of the rivers. The Saskatchewan, the Peace and other rivers and their tributaries flow in beds from two to five hundred feet below the general surface of the country, with valleys from half a mile to a mile and a half in width. This soft surface is naturally fitted for cultivation so far as the climate permits, and this is sufficiently favorable as far north as the latitude of the peninsula of Alaska.

The Basin of the Great Lakes is naturally as fertile on the northern as on the southern side wherever it was low and level enough to receive the drift deposit produced during the Glacial Period; and the lower valley of the St. Lawrence was an arm of the sea during the Champlain Period that followed the Age of Ice. Lake Champlain was then an inland sea visited by whales, and the water is declared to have stood several hundred feet deep over the site of Montreal. It was gradually raised during the Terrace Epoch that followed next; but a vast amount of fertilizing material was spread over the lower and more level parts of the St. Lawrence valley when the sea retired.

The Laurentian hills, or mountains, are low, seldom exceeding 1,000 feet, except near Lake Superior. There are several ranges, the one farthest north forming the watershed between the streams that flow into the St. Lawrence and those flowing into Hudson's Bay.

The Laurentian range furthest south skirts the St. Lawrence River from a little below Quebec to its mouth, and a kind of mountain plateau, or a sea of hills from two to five hundred miles wide, fills the intervening space. There are occasionally rivers with their valleys, lakes with more or less extensive basins, and large tracts of fertile land scattered through this space and within, or northwest of, the lower Laurentide. Such a fertile area is found on the Saguenay River and in the basin of Lake St. John, from which it flows. The Saguenay is about 200 miles long—a narrow but deep and powerful stream. About its headwaters and along its course is good agricultural land that would well sustain half a million of people. The ice flow of the Glacial Period, the disintegrating force of the atmosphere of countless ages and perhaps some deposits from the sea in the Champlain Era have provided a soil over all this low mountain region sufficient for forest growth where winds from Arctic ocean currents render it too cold for successful farming. It has been stated that there were nearly three hundred thousand square miles of valuable forest in the Provinces of Quebec and Ontario (Lower and Upper Canada).

The Ottawa River flows into the St. Lawrence at Montreal from the northwest, after a course of about 800 miles, passing the lower Laurentide about a hundred miles above, and nearly west of Montreal. This range then sweeps around to Kingston, at the foot of Lake Ontario, thence across westward to Georgian Bay, on the east side of Lake Huron, and then north and west along the shores of Lakes Huron and Superior, where the elevation rises to its maximum—some 2,500 feet. It was supposed, until late years, that good farming land was to be found only south of this range; but this has been found an error. The upper valley of the Ottawa, especially on the Lake Huron side, is almost as valuable as that south of this Laurentide, and the area large. It is now being settled and farmed with success, and the Capital of the Dominion is located at the east side of it, on the Upper Ottawa. The winters are modified by the vicinity of the Great Lakes and the climate is no more severe than at Montreal.

The second period of mountain making is represented in the northern termination of the Alleghanies, which skirt the St. Lawrence on the south at the distance of twenty to fifty miles, and end on the shores of the Gulf of the same name. The higher elevations are about 1,500 feet. Another nearly parallel range passes through the whole length of Nova Scotia north of its center. The surface is raised along the Atlantic coast of Nova Scotia, leaving a valley, or basin, thirty to forty miles wide, very agreeable and fertile. Northwest of the Cobequid, or central, range of Nova Scotia, are fertile tracts, or minor basins, and the mountains themselves are wooded and possess a fertile soil. The Bay of Fundy lies between Nova Scotia and New Brunswick, the latter lying rather high, in general, as a moderate plateau between the two ranges of mountains, traversed with rivers and their valleys and as fertile as the best parts of New England—perhaps more so since a large part of its surface is underlaid by rocks of late formation and only elevated after the Great Coal Making Era, when the Alleghanies were produced.

There was an extensive development of coal in New Brunswick, Nova Scotia, and the island of Cape Breton, of excellent quality and lying near the coast. These deposits are the more valuable by reason of their accessibility from the sea and the coasts, and being on the track of the vast and growing commerce between Europe and North America. Canadian development has been so limited, and attention so fully occupied with the neighboring fisheries and the lumber interest, which the fine forests of these Provinces and their situation made so important, that their agricultural and mining wealth have had comparatively little stimulus. New Brunswick is said to have about 10,000 square miles of coal field and Nova Scotia and Cape Breton have vast quantities in very thick beds, and of high quality. A remarkable future, agricultural, commercial, manufacturing and mining, awaits this part of the Dominion. So far, the Great Republic has made such a stir in the world as to turn even the attention of England from these vast and valuable resources. The Atlantic Slope and the Great Valley are now so advanced in growth as to permit industrial and commercial enterprises to occupy themselves with the great and varied resources of the Dominion which lay so near the great centers of modern activity as to be overlooked simply because they were just outside the beaten track in which capital and enterprise had learned to flow.

The third, and greatest mountain making epoch is represented in the Dominion on the western borders of the central trough. The eastern summits of the Rocky Mountains bound the Northwest Territories on the west. The Rocky Mountain Plateau fills most of the space between these summits and the Pacific Ocean, forming, with the islands on the coast, the Province of British Columbia. The mountains here approach their northern termination and crowd the plateau into less space as well as very much diminish the general altitude they reach between the Great Valley and the Pacific Coast, farther south. A few summits rise from 12,000 to 15,000 feet; but the general height of the Main Ridge is from 4,000 to 7,000 feet, while some of the passes fall considerably below 3,000. This low structure has an important effect on the climate of the trough, or basin, east of the mountains and gives greater effect to the influence of the Pacific Ocean and its warm Asiatic currents on the Plateau itself. Especially favorable is the subsidence of the mountain ranges and plateau in the north, where the Peace River breaks through the main ridge and flows into the central basin to join the Mackenzie. This is nearly opposite the retreat of the coast line inward at the southern part of Alaska where the warm Japan Current reaches the American continent. The warm winds readily cross the comparatively narrow and low mountain heights and modify the climate of the Peace River valley remarkably. It is the most northern region on the continent adapted to extensive agricultural development, and this aid from the warmth of the Pacific current renders it as eminent in favorable features of climate as its geological formations made it in virtues of soil. Although it has a severe winter from the flow of Arctic cold up the Mackenzie, it is not more severely felt, probably, than at Quebec, and its summer is as favorable to the growth of vegetation as the shores of Lake Ontario. The wild flowers and plants in both are said to be largely the same and the components of its soil are not excelled in all the world for abundant elements of fertility. From the northern fertile limits of this valley to the United States Boundary Line there are said to be 600,000 square miles adapted to the uses of agriculture, more or less admirably.

Part of this immense region is heavily wooded, the basin of the Peace River itself lying north of the forest regions; part of it is a beautiful rolling prairie; and adjoining sections next to the mountains, which are considered too slightly watered for successful agriculture, are valuable for grazing. This has, for unnumbered ages, been a favorite feeding ground of vast herds of buffalo, and is substantially the same in soil and climate as the "Plains" west of the Mississippi. If the winters are colder, the air is drier, more fully supplied with oxygen, and the cold is not more harmful or uncomfortable than in the region of the Great Lakes, or, at least, at Quebec. The soil freezes to the depth of some feet, spring comes on suddenly and rapidly, and the frost, long retained beneath the surface, furnishes moisture to vegetation until growing plants have acquired strength, the heats of summer have reached their height and are ready to mature the crops in the soft, deep soil. Thus, if the growing season is shorter than farther south, the speed made in growth is greater, the harvest is none the less sure, and even more abundant for all the most important cereals and roots.

This central region, it is believed, may easily sustain 100,000,000 people when fully developed, and cultivation, tree-planting and the various appliances and activities of civilized life will be sure to promote as important favorable modifications in the climate as on the "Plains" of the Mississippi Valley below. There will be more rain-fall and therefore an enlargement of the fertile area, as well as increased fertility; winds will be less severe and powerful in winter from the increase of wind-breaks; and probably the actual intensity of cold will be decreased. It is an extremely healthy region. The tonic quality of the air and the long rest of winter promote physical vigor, intelligence, and pleasant social intercourse, and it seems probable that the best and most rapid progress in all the lines of the highest civilization will be at least equalled here when settlement is complete, and industrial, political and social affairs are fully organized.

The mountain plateau and Pacific Coast region of British Columbia have peculiar and great advantages. There are two principal ranges of mountains—the Coast Range next the Pacific, and the Rocky Mountain chain proper, on the east. These are not far from 300 miles apart—the intervening plateau varying from 1,500 to 3,500 feet in height, with some few localities of considerable extent yet higher in level. The southern part of this interior is drained by two large river systems—the Columbia and the Frazer. The basin of the Columbia within the Dominion is said to cover 45,000 square miles. It is the northern extremity of the interior trough, or high valley, of which eastern Washington and Oregon, Idaho and western Montana, Utah and Arizona are the southern continuation to the Gulf of California. The climate is modified by vicinity to the warm waters and winds of the Pacific flowing up through the coast valleys and over the mountains. The Cascade or Coast Range precipitates most of the moisture of the clouds, and much of the land needs artificial irrigation to produce reliable crops; but water from mountain streams is plentiful, and the soil wonderfully fertile. Lands too high, or with a soil too thin for agriculture are clothed with excellent and most valuable forests, or are admirably fitted for grazing. The valleys are extremely fertile and the basin plateaus they drain, especially on the east, are extensive, and, with irrigation, will become an extremely valuable and productive farming region.

The higher plateaus, in the centre, seem unadapted to farming but are believed to furnish large areas suitable for that purpose further north, where the plateau is often less than 2,000 feet high. The remainder is valuable for raising stock, and furnishes vast quantities of lumber. The Cascade Range approaches the coast in some places, and in others is from fifty to one hundred miles inland, and the sea line is extremely irregular. There is a succession of islands, sometimes so numerous as to form an archipelego, bays and inlets run far into the land and often branch in various directions, forming an extraordinary sum of water line. British Columbia on the continent borders the ocean in a straight line less than 600 miles; yet it is estimated that all the irregularities of the shore and the islands bordering give a water water line of 10,000 miles.

The island of Vancouver, off the coast, contains 16,000 square miles, with much fertile land. The other islands, some of them of great size, and the level portions of the main land west of the Cascades, are abundantly watered, and mostly covered, especially the latter, and the sides of the mountains, with vast quantities of some of the most valuable shipbuilding timber in the world. No region excels it, unless it be the Pacific coast of Washington, Oregon and California below.

We have seen that the eastern extremity of the Dominion was well supplied with coal, produced at the close of the Palæozoic time during the Great Coal-making or Carboniferous Age. The Northwest Territories have deposits much more extensive in area, made during the last part of the Mesozoic, and, perhaps, the early periods of Cenozoic Times, just before the Rocky Mountains were raised. The coast of British Columbia and the eastern side of Vancouver Island have very large and valuable deposits, and a basin from one to two hundred miles from the Pacific in the interior, is believed to have a large extent of surface underlaid with it. It is more perfectly reduced—that is, more carbon and less lignite—than some of the coal of the Western United States, and it is believed that, on the coast, it will answer all the purposes of steam production for commerce, and in the interior, the requirements of the railroad, of manufactures and of the household. On Queen Charlotte—a large island some 600 miles north of the Straits of Fuca—there is anthracite coal.

Metals of almost all kinds are extremely abundant in most parts of the Dominion. Gold and silver are found in moderate quantities in the Eastern Provinces and near Lake Superior, and the Rocky Mountains seem to be as rich in precious metals in British Columbia as in Montana and Idaho adjoining. The regions where they have been found most abundant, as yet, lie far in the interior, the country is extremely new and the difficulties in the way of mining development have been very great. Some $50,000,000 have been obtained, chiefly in gold, from British Columbia. Iron and copper are above measure abundant in the vicinity of Lake Superior and elsewhere on the borders of the primal Azoic continent; salt is abundant; petroleum has been found in Ontario and there is promise of it in other regions; lead, chemical fertilizers and the finest marbles and building stone are found in the eastern regions, and vast supplies of many other metals and minerals are likely to be furnished as they are sought for.

One of the remarkable features of the Dominion is the extent and value of its fisheries. Those of the Eastern Provinces, in the Gulf of St. Lawrence, on the Banks of Newfoundland and the adjacent coasts are very extensive and have been improved by the French, the English, Americans and Canadians since the days of Columbus. The value of the fisheries is now to the Dominion nearly $14,000,000 annually, and France and the United States have treaty rights of taking fish off the coast almost equal to those of Canadians and English themselves. The value of fisheries in the Lakes of the interior, in the long rivers, the mighty St. Lawrence and the waters of Central British America, or the great Northwest, is very large, though comparatively undeveloped. Those of the coast of British Columbia are equal if not superior in importance to the Atlantic fisheries. The many inlets, which often run fifty miles into the land, the wide and deep mouths of rivers and the vast quantities that throng the waters of the Pacific on the coast and about the islands constitute together a very extensive fishing ground. The warm Asiatic Ocean current which strikes this coast is similar to the Gulf Stream that passes over the Banks of Newfoundland, and is probably the cause of the rendezvous of fish in each locality to such an amazing extent. Probably the value of both eastern and western fisheries will in a few decades become worth $100,000,000 annually. This industry is one of great value also for other reasons than its immediate money estimate. It raises up a large, hardy and skillful seafaring population, encourages the growth of commerce and shipbuilding and educates seamen for the Dominion navy as they may be required. Its tendency to develop ocean commerce is strong. This commerce becomes a source of great financial gain and national growth since it tends to provide foreign markets for the productions of the country.

Canada is overflowing with resources of various and most important kinds and only awaits the proper time for their development to become one of the most comfortably prosperous countries in the world. Its hour has not yet struck, but is probably near at hand. The United States had the largest body of rich land in a temperate climate in the world. All its other resources were of immense magnitude, easily accessible and lying in the pleasantest part of the temperate zone. At the most favorable time it built a new and improved republic which was guided by all the wisdom, energy and skill of a select European race. It and its land became famous and almost monopolized the attention of the floating enterprize and capital of the civilized world. Only when its vast opportunities were so fully acquired and developed by private parties that both capital and enterprize should remain unemployed, or should fail to find extraordinary openings for profitable use, could neighboring fields more difficult of access, of less prestige, and whose value prejudice had obscured, receive adequate attention.

In addition to this obscuring influence of the name, fame and marvelous growth of the Great Republic, in the shadow of which the possessions of England in America lay almost hidden, unknown to or unvalued by England itself, were the various features of its own history. The fine economic virtues of the early French settlers lay dormant under the mistakes in the colonial policy of France; then they were shut in and antagonized by a strange race which settled both east and west of them. The English colonies were comparatively small, poor, scattered and dissociated from each other. The railroad and telegraph alone could conquer the long distances that kept them apart, without good markets or the strength to force their way to them. The situation is changed and changing and a great career lies within their grasp.

CHAPTER III.

THE PRESENT AND FUTURE OF THE DOMINION.

In 1867, the year of Confederation, the realized and available wealth of British North America, including Newfoundland besides all that now composes the Dominion, was estimated by a competent authority at one thousand, one hundred and thirty-six million dollars. This included only the sum of private property, exclusive of railways, canals, public buildings, and all property that belonged to the public domain, as also of lands not in farms, lumber, mines and fisheries. It was estimated in 1870 that these same values had increased by at least five hundred million dollars. Development has been continued another decade—rapidly for the first three years following 1870, and much more slowly since 1874.

During most of these six years the world at large suffered under great financial depression. Great difficulties surrounded many of the larger enterprises of business. General values were diminished and the activities of capital and enterprise were seriously restrained. Yet the same actual property existed and continued to increase. Prosperity did not seem as great as it actually was from the greater slowness of interchanges and difficulty of immediately realizing their ordinary value. They were as fictitiously low as, in times of brisk movement and financial buoyancy, they were fictitiously high. At the close of the decade commencing with 1870 the realized wealth of the Dominion must have been equal to three thousand million dollars, at least, besides a very great improvement in the facilities and instruments with which a much larger relative increase was to be made in the future. Nearly three thousand miles of railroad had been built during these ten years, costing perhaps $175,000,000, and adding as much to the value of lands and property lying near them. Probably the increased facilities of transportation doubled the capacity of the people to produce results.

The immediate value of these business facilities could be realized only in part for want of the accustomed ability of markets to clear themselves, or to receive on the same scale as formerly. Financial troubles diminished purchases and sales at once. Yet a slow but very solid improvement went on in many ways not readily observable at the first general glance. When general financial pressure should be removed it would become apparent that the Dominion was vastly richer and capable of a much greater momentum and speed of progress. The United States was the first among the nations to recover from this depression, and the real progress there under an apparent decay of prosperity became immediately evident. The experience of Canada must be similar since its natural resources are similarly great, and the preparation for realizing them was perhaps as great in proportion to its inhabitants and means. It is even probable that, if an equally lively state of business activity should bring into full use all the increased facilities for production, at the end of two years of such prosperity the whole realized wealth of all Canada would be found equal to five thousand millions of dollars.

This would certainly place Canada on a comparative level with the eminently prosperous Republic, and even a considable per cent more. She has no vast reserves of wealth, but values are much more evenly distributed. She has few paupers, few unproductive and idle classes, few large cities and manufacturing centers to gather hundreds of thousands of operatives who make a bare living from year to year, without power to improve their future. Most of her people are scattered over her vast territory as agriculturists, and, if they realize but a moderately comfortable living for the present, their labor continually tends to prepare a better one for the future. Wealth, or capital, is better distributed; it is therefore more profitably employed in proportion as it falls into the hands of a large number of small proprietors, who employ it under their own eye, and apply their own labor and thrifty prudence to its increase.

A new country grows, accumulates, more rapidly in proportion than an older one. Canada may hope to lessen considerably the great sum of present disproportion between her wealth and that of older countries, because she builds chiefly on new foundations and increase has more the character of a creation than that obtained from the earnings of capital invested. She has also a great advantage as well as a disadvantage in having her fairest, most populous and productive regions separated by only a conventional line from the most prosperous regions of the United States. Institutions and business being fairly free on each side of that line, and the habits and character of the people similar for thrift, enterprise and vigor, prosperity will not be easily confined to one side of it. Business, to a greater extent than appears at first view, sets at naught International Lines and Tariffs. If these prove to be dams that prevent a free flow backward and forward to a certain height, when activity becomes great and prosperity rises high on one side it flows over the barriers by a necessary law.

Thus conventional law finds its limit of power very much narrowed by the action of natural law. Although Canada is, by conventional law or political relations, closely connected with England, natural law or business relations associate it much more closely with the United States. Its imports from the Republic, in 1878, exceeded those from Great Britain by eleven million dollars. Lumber has been in recent years about 95 per cent of the exports from Canada to the United States, and, in the years 1876–7–8 the goods entered at its custom houses for consumption from the United States exceeded those entered from Great Britain by about $30,000,000. All this was in the face of high tariffs in the Republic, and the absence of such cordial commercial relations as the interests of trade in each country demanded.

The interests of business are sometimes made secure under international laws, treaties and courtesies that form a new and significant feature of more modern national intercourse. While yet the Pacific Railway between the Eastern Provinces and Manitoba was incomplete, a branch of that future system was constructed from the capital of Manitoba southward, and it was met at the International Boundary by an American road connected with the general system of the United States. This again was in connection at many points with the Canadian system. A system of bonding regulations for goods permitted continuous transport from Canada through more than a thousand miles of the United States territory to Dominion soil again in Manitoba. So also one of the longest lines of railway in Canada has a western terminus in Chicago and an eastern in Portland, on the Atlantic; and the railway systems of the United States and Canada are adjusted to each other so as to promote the requirements of business in either country, as perfectly, under tariff restrictions, as possible. All this has continued many years, has led to very intimate business relations, and seems sure to result, sooner or later, in commercial interchanges between the Republic and the Dominion almost as free as those between the different States of the former.

The best machinery for manufacturing and for the farm, the most intelligent methods and the most convenient implements of agriculture successfully used by the Anglo-Americans very soon find their way into Canada, thus establishing real reciprocity in all fields of progress, intellectual and practical, not immediately related to political affairs. By this means the powerfully progressive spirit that has been maturing among Anglo-Americans for two and a half centuries is communicated much more completely to Canadians than to European nations, or any other American nation. Retaining English principles and methods of government they are highly receptive of the business principles and methods of Americans. So the tendencies are to uniformity with the United States in the last and to diversity in the first. Inspired by the example and success of their neighbors, as well as possessing, inherently, the qualities that have made England the most powerful country of the nineteenth century, having obtained full control over their own affairs and important credit with English capitalists, Canadians have addressed themselves to the task of developing a new country with vigor, skill, and a very real success.

In 1868 the total commerce of the Dominion amounted to something more than $130,000,000. Since 1870 it has averaged fully $180,000,000—sometimes rising much above $200,000,000. It had much less than one-tenth the population and wealth of the Republic, yet its commercial business has been about one-sixth as much. Its public debt is now about one-twelfth that of the Republic, but it has all been employed in public works, most of those tending to increase the business facilities of the country, so that the expenditure has increased, by several times, the value of the property of its population and the annual income from that property. The wealth it creates can well afford to pay the interest on the debt and provide a sinking fund to extinguish it.

A small nation, widely scattered, with agriculture as the occupation of the mass of its people, it is the fourth in rank among the nations of the world in the number of its vessels and capacity of its merchant marine—the first being England, the second the United States, and the third France. With so good a start, with a railway connection between the two oceans and through the richest regions of its vast territory to be developed in the future, it is not unreasonable to suppose that it will soon reach, and ever hold, the third place among commercial nations. Its Eastern Maritime Provinces —so near Europe, the commercial section by eminence of the

United States, Eastern South America and the West Indies—its mighty River and long line of Lakes, giving a water route half way across the continent—not to speak of Hudson's Bay, which may yet become of great importance in commerce—and British Columbia with the numerous islands and ports on the coast—all these foreshadow for it a special eminence as a commercial country, and promise many markets for all its various productions when its resources are fairly developed.

It is also to be considered that its future will not be as dependent on its own resources and comparatively small and poor population as was the United States at the beginning of the present century. The world of business has, in the last thirty years, become, in a large degree, a republic in itself. It has a constitution and laws of its own which are more and more fully recognized and their operation assisted and protected by International Law and by numerous Treaties between most of the civilized nations. To promote a world-wide business activity and furnish its people the largest possible field for gain under the best possible circumstances has become one of the recognized and leading duties of national governments.

By the operation of these laws of business, the accumulations of capital in a rich country are employed wherever there is the surest prospect of the largest gains. That region whose resources and development promise most on investments, or open the way best to world-wide activities, receives most attention and aid from the financial world. So hundreds of millions of dollars are invested in railroads, mines, lands and various great enterprises in the United States by the capitalists of Europe. The civilized world, in many ways and to an important degree, has come to the aid of the Republic in the vast undertaking of developing its resources, and the profit resulting has not remained wholly within the region and country so aided. Great incomes in England, in

France, and other countries are derived from property in the United States, directly or indirectly.

After a time growth will become comparatively or apparently slower in this favored country, gains on a given investment in a given time will be less; business will take a wider sweep and require additional fields to open and facilities for still greater operations. Canada will, by and by, receive a considerable share of the attention and aid that is now so largely concentrated on the vast territories and multitudinous resources of its great neighbor. The valleys of the Red River, of the Saskatchewan, of the Peace, of the Thompson, the Frazer and the Columbia will offer attractions similar to those of the Ohio, the Mississippi, the Missouri and of California. Wheat furnishes the best food to the largest number of the human race and the fertile areas of the world where it can be permanently cultivated with more profit and greater certainty than other food plants are limited. The deep rich soil and cool climate of these parts of the Dominion will become the world's greatest and most reliable granary and cultivators, capital for development and transportation facilities will flow there from all parts of the world in abundance almost without limit in due time. Cattle will cover the vast prairies and mountain plateaus to be shipped to Europe and Asia; the product of the mines of precious metals will rise from its present annual three millions to fifty or eighty millions; its splendid forests will furnish lumber to distant countries; and the present large hopes and anticipations of its statesmen and economists will be realized as fully as those of earlier generations of Americans are being realized now, or secured for a very near future.

Its inhabitants, descendants of the economizing French, the thrifty Scotch, the bold and enterprising English and hopeful Irish furnish a suitable basis of character and capacity on which to build a great, vigorous and intelligent national development. Their Government will be wise and strong enough to promote and protect all the interests that may be attracted to them, to maintain political freedom and social order. The overpowering greatness of the United States, the preference of European emigrants for it as yet, its more genial climate and compact as well as boundless resources, seem to throw Canada and its expectations into the shade. The large future its people foresee seems to the American almost ridiculous. He can discover hope for it only in becoming an appendage of his great and prosperous Union. Yet his own anticipations of what he has already realized seemed as futile and as distant to the citizens of a great European monarchy fifty years ago. The American has three times virtually invited Canada to cast in her lot with him, and Canada as often declined, preferring a political future of her own.

The more her territory is studied the larger and richer appear its undeveloped resources. They are certainly immense, and practically inexhaustible. If Canada wants many of the peculiar advantages of the United States it has many others of its own, and its treasures are being put in the way of development by capital and all the latest instruments of progress which the Republic itself has but lately obtained. Apparently, the period of rapid expansion is approaching for Canada. Immigration to Canada rose by steady annual increase from 10,000 in 1866 to 50,000 in 1873. Since that year it has averaged about 30,000 annually, or not far from 400,000 in fourteen years. Another decade is very likely to introduce a million Europeans and more or less Americans. Then every section of the Dominion will have its railroad system tributary to the trans-continental trunk line, and the various water routes of the east. A massive development may be supposed to have fairly set in by that time—at least its beginnings will have become general—the population increased to seven millions, perhaps, and the aggregate wealth of the Dominion should have risen to ten thousand millions, with beginnings of rich future increase appearing in all directions. Should commercial free trade have been inaugurated between Canada and the United States for a few years these figures may be exceeded. By that time the great public debt resulting from the Civil War will have been so greatly reduced that the Republic could probably afford to renounce its heavy import tariff especially in favor of its near northern neighbor.

By the close of the century there should be ten million inhabitants in Canada, its wealth of 1890 should have doubled, its trade and commerce have become proportionately large, and its fertile sections well cultivated and smiling in plenty. The Dominion has certainly a great and prosperous future before her.

ENGLAND.

CHAPTER IV.

THE BRITISH ISLANDS AND THEIR PEOPLE.

Great Britain, according to the accredited statistics and estimates available at the beginning of the year 1880, had the largest amount of realized wealth of any country in the world. It has the largest marine tonnage, the most valuable commerce, the most extensive manufactures, by far, of any nation of any time in the world's history. The Government and Parliament of Great Britain extend a more regular and powerful influence over a larger area of the earth's surface than any other government of ancient or modern times. The Chinese Empire counts a much larger number of subjects; yet the policy and decisions of the English ministry exert a far more effective influence on the mass of individuals of the human race than the Council of the Chinese Emperor.

Yet this foremost country of modern times has a small base for such a magnificent superstructure, so far as it is to be counted in square miles. The "Home Country," or Great Britain, as distinguished from the foreign possessions of the British Empire, is composed chiefly of the two islands of Great Britain and Ireland. Several small islands and groups of islands, of less than 400 square miles in surface altogether, lying near it are usually counted in. The largest island contains England, Scotland and Wales. The whole surface of this island is a little smaller than the two States of Illinois and Iowa. Ireland is not quite as large as the State of Indiana. Illinois is about as much larger than England as New York is smaller; the difference in each case being about 4,000 square miles. Wales is about the size of Massachusetts, Scotland is a little larger than Massachusetts, Vermont and New Hampshire united.

Wales has about one and a half million inhabitants, Scotland about three and a half millions, Ireland some five and a half millions, and England about twenty-two millions. Thus England, which has much less than half the surface, contains more than two-thirds of the population. Wales is extremely mountainous, Scotland lies far to the north, and its northern regions are also mountainous. They are called "The Highlands," and are cold, wet and sterile compared with England. Ireland is very much broken into elevations and rocky ridges, the center being a shallow basin, with the principal elevations on the borders. England is also uneven, and in some parts even mountainous, yet it is, for the most part, fitted for agriculture and very fertile.

The British Islands are in a high latitude. The southern extremity of England reaches only to the fiftieth parallel of north latitude. All the eastern Provinces of the Dominion of Canada lie south of this line except the extreme northwestern part of Quebec bordering on Labrador. The larger part of Manitoba is also south of that parallel, and the Peace River Valley of the far northwest is in the latitude of Scotland. The climate of Great Britain is modified by the Gulf Stream, a warm ocean current, which, flowing out of the Gulf of Mexico northeastward, is turned across the Atlantic toward Europe by Nova Scotia and Newfoundland, the British Isles lying on its track as it approaches the eastern continent. It produces a warm current of air laden with the moisture which they give forth in a very abundant rain-fall, especially over Ireland, Scotland and the west of England and Wales.

A ridge or watershed, runs through England and Scotland, the larger part of England lying east of it. The cool heights of this ridge, sometimes rising several thousand feet, arrest the clouds and wring much of their excessive moisture from them, leaving a large part of England, which lies east and southeast of this ridge, moderately watered while tempered in climate by the warm winds. The principal embarrassment to agriculture in the United Kingdom (as Great Britain and Ireland are called), is from excessively wet seasons. Sometimes several follow in succession, which produces great disaster and for the time distress. Yet extremely favorable seasons are usually found to follow, so that the average is highly favorable to abundant crops.

These islands had a long and eventful geological history. Although they are separated from the continent of Europe by the North Sea, the Straits of Dover, and the British channel they rest on a submarine plateau nowhere more than three hundred feet beneath the sea level. A small elevation would make this whole plateau and all the islands a part of the continent, as they have actually been at some geological periods. Constant, but gradual, changes of level over the islands through almost all geological time have developed nearly all the various rock formations and the remains of animal and vegetable life characteristic of each period. The disturbance of these strata by volcanic forces has turned them up to the study of modern science and placed the valuable economic deposits of each within the reach of enterprising industry. The mineral resources of England were extraordinarily rich and well located. Coal is one of the chief of these. It underlaid about 14.000 square miles, often in extremely thick seams and of the best quality. An abundance of iron ore was also developed, especially in connection with the coal. Iron is often found in the rock formed between the layers of coal. It was of good quality for all common uses, and. being on the spot where suitable coal for reducing it abounded, might be worked at the least possible expense.

Various other minerals and valuable building rocks abounded. Great activity in rock making was displayed in most of the Geological Periods and a profusion of animal and vegetable life enriched the rocks with materials for future soil. There was also much activity of volcanic forces Volcanos, or deep clefts in the rocks, poured out vast quantities of lava at some periods which enriched the soil in the long course of ages with various chemical combinations entering into the structure of plants. The surface rocks were finally—after all these treasures were collected and the structural work of Geological Time was completed—worn and ground fine by the powerful ice floe and glaciers of the Glacial Period and spread over the surface of the country.

The materials from which man was to produce wealth were more abundantly stored in England than elsewhere in these islands. The more level parts of Scotland, called The Lowlands, constituting the southern portion of that former kingdom, were very similar to England. Wales and the rugged West of England were rich in mineral deposits. Ireland was supplied with a good soil but less abundantly with minerals. It seems probable that there was more than one Glacial Period in Europe and Great Britain, and that man appeared before the last one came on, before which he must have perished or retired. But he came back again very soon, and before the various changes of level following in the Champlain and Terrace Epochs ceased. Traces of his remains and works are found in ancient caves in company with those of the great and fierce animals of an early time and he seems to have been only less wild and rude than they, yet with a capacity of improvement very distinctly marked in the traces he left behind in the long ages that followed before the opening of the historic period.

He was still comparatively a savage when first visited by the Romans just before the Christian Era although far in advance of the primitive rudeness. The inhabitants of that time were Celts, of the same race and origin as the inhabitants of the southern part of the neighboring continent. These are believed to have migrated from Central Asia in a far off time as conquerors of still more ancient races, whose origin can not be clearly made out, though it is believed by many that they also found their way here from the plateau of Central Asia.

The Romans occupied the southern part of the larger island, now England, for several hundred years, introducing their laws and civilization, making roads and building cities. The traces of their occupation are numerous, often very marked and interesting. When the Roman Empire began to crumble under internal weakness and the attacks of northern barbarians the legions were withdrawn from Britain and the natives, now considerably civilized and christianized, were left to themselves. They had lost the habits of self-rule and much of the fierce bravery that had belonged to them before the Roman conquest. They fell into disorder and rival leaders quarreled. The weaker party invited the assistance of Hengist and Horsa, chiefs of war parties of the Saxons, who lived in the northern part of Germany. The Angles and the Saxons were German tribes, rude, restless and warlike, yet by no means wanting in the primitive elements of a vigorous civilization.

These German troops gave the required aid to their employers, liked the land and found pretexts for remaining. The Britons were unable to expel them. Centuries of fighting followed. The Angles and Saxons settled in separate colonies, or tribes under military leaders on various parts of the eastern and southern coast, bringing their wives and children, their flocks and herds, their national institutions and laws. Each formed a little state with a king at its head who ruled by the advice and consent of the freemen of the community. There was no strict definition of powers and duties but the king was essentially at first a leader among equals, appointed to execute the will of the general body of the tribe or small kingdom. The general welfare of the whole community was looked after and its will expressed by its wise men—its mature, experienced and capable citizens—assembled in council. This body was called the "Witan-agemot"—the Assembly of the Wise. Properly it embraced, or might embrace, all the mature male citizens, whose relative weight in it depended on the greater or less extent of their wisdom according to the standard of that time.

Essential equality of liberties and rights lay at the heart of these institutions as they had developed in the German forests. They were based on the strong individuality, the tendency to vigorous self-assertion, of the man. This quality in the North American Indian made combinations to form a strong government impossible, because, in them, individual will was stronger than the combined intelligence of the community. In these German tribes intelligence and will were developed in harmony; thought could control instinct, could see the true value of union and determine the individual to make such concessions of his own will as would secure the greater advantages and power resulting from the vigorous exercise of the combined force of the community. Most communities, in an early stage of development, have been found incapable of a self-control and intelligence sufficient to produce moderation. When they began to yield they lost the power of resistance to resolute rulers; submission to a will not their own became a habit and their government a despotism.

This was never the case with the Anglo-Saxons in any proper sense, at least; if dormant for a time it remained a strong vital force for more favorable opportunities. For some centuries after they settled in England they were almost constantly at war with the native Britons, or Celtic inhabitants; then the small kingdoms grew and crowded on each other, which led to war among themselves, followed by invasions of other Teutonic tribes from the neighborhood of their old homes on the continent. These were leading features in their history until the Normans finally defeated their native army and king, and took firm possession of the government. The king, from the first, represented the community, and was their natural leader in war. This almost uninterrupted series of wars gradually accustomed king and people to a more concentrated and independent use of power by the king and his officers than their institutions and early habits contemplated; yet the strong instinct of the race maintained the old forms in a general way, and such restraints on arbitrary power as the disturbances of the times permitted. In the course of centuries many changes passed over the country and afforded great opportunities to ambitious princes; yet they were never permitted to feel themselves really above restraint. The Norman kings were vigorous and ambitious, and long held rule over great territories on the continent, which increased their power, and their tendency to disregard ancient English customs and liberties; but with this despotic tendency in the king the resistance of the English increased. At intervals the kings were required to recognize and legalize afresh the ancient rights and liberties of the nation, and there was always a system of local government in the towns and shires that preserved the mass of the people from more or less of the severities of arbitrary power.

The Feudal System was approaching its full development when the Norman Conquest occurred in 1066. This system tended to accumulate power in the hands of the nobles. The people were always left out of account, and the king had little more than nominal authority. But the ancient spirit was still strong in the English people, and the king favored them in order to get support against the nobles. When, on the other hand, the king became too strong for the nobles they courted the people for a similar reason. Out of this rivalry rose the "Magna Charta," a written definition of the ancient rights and liberties of the Anglo-Saxons, exacted from the king by the nobles. The English nobility have always been more patriotic than those of any other country, and that has ever secured them so much respect and love from the people that they have in recent times maintained an unexampled influence in Great Britain.

When the Feudal System broke up and the modern period began to dawn, kings, as the representatives of nationality, received much of the power that had been possessed by the feudal lords, and the tendency to despotism was strong. In England the nobility and gentry were often on the side of liberty. A part of them, at least, placed themselves on the side of the people at large. The peculiar organization of the higher classes contributed much, during several centuries previous to the seventeenth, to secure the ultimate ascendency of the body of the people in the conduct of the Government. This did not include anything like a really popular or formal representation till some time after the middle of the nineteenth century, but was sufficiently satisfactory to keep down extreme general discontent and maintain constant progress in a liberal direction. This end was secured by the legal classification of all the descendants of noble families not representing those families as their head by special title as Commons.

All the children of a titled nobleman, or peer, were legally classed as Commons. No one except the elder son, or the direct male heir, could rise out of the ranks of the Commons but by special exertion of the royal authority in creating him a peer. These Commons represented the primitive freemen. All, originally, had the right to sit in the Witan-agemot. As numbers increased this became impossible and undesirable. Then their representatives were chosen in the shires, or smaller divisions constituted for local government, by their equals, or by local officers, or were specially called to sit in council by the king. When organization became more precise, by laws carefully defined. they were elected by those classes of the people recognized as Commons. These comprised, in general, the property-owners of the country as distinguished from the peasantry, or lowest laboring classes without property. About three hundred years after the Norman Conquest these representatives of the intelligence and wealth of the country at large began to sit in a separate place, and transact business apart from the nobles or lords, who were, at first, considered as the especial councilors of the king, but finally became a co-ordinate branch of the law-making power.

These branches were at length called a Parliament—that is, a talking body—or one which the king talked with or consulted, as to the public welfare. The king was always held as the embodiment or representative of the nation, and all the business of Parliament was done in his name. The power of the king to make laws alone was never formally admitted, although it was clearly defined only in the really modern period. Arbitrary action without consent of Parliament was more and more persistently resisted, until the obstinate Charles I. was opposed by an army raised by Parliament, his partisans completely defeated and he beheaded. The attachment of the people to their ancient forms was too strong, however, to permit the definite establishment of the different mode of government adopted for a time, and they, after the death of Cromwell, recalled the son of the sovereign they had deposed and executed.

The Parliament, however, was still unable to exert the desired control over the government, and less than thirty years after the death of Charles I. another revolution deposed the reigning sovereign, and Parliament elected another under such conditions that it could be sure of gaining its ends in all future time. Under the name and forms of a monarchy the country now came to be really governed by the Parliament. The acting Privy Council, or Ministry, of the Sovereign performed all executive acts and controlled him by their "advice" in such as were legislative or judicial. The ministers were "responsible" to Parliament, and must lay down office whenever their proposed measures failed of its approval.

Thus, after the lapse of fourteen hundred years, the substantial features of the Primitive Teutonic, or Anglo-Saxon, political organization were fairly unfolded in the midst of an elaborate civilization. The English people held most tenaciously, in the long run, to the principle of individual liberty. Yet this claim was asserted with general moderation, and often permitted to lie dormant. Temporary need of strong organization was recognized, and often seemed to endanger the ancient liberties of the people by permitting the exercise of arbitrary power which constantly sought pretexts and means to perpetuate and extend itself. Despotisms of many forms and degrees often became strongly intrenched in the political or social structure during rude and changeful times, when they seemed the only available bulwarks against greater dangers. When the danger was quite past the rulers fought hard for the extra powers. In the end this was defeated by the people. The race was incomparably bold and brave and inclined in all ages to maintain a position once fully taken at all risks. Yet, beside this indomitable quality was the other of moderation, arising partly from tolerance and partly from an intelligent appreciation of the situation. Good sense and self-restraint, or sometimes endurance, have been as prominent in English history as fierce resolution and a valor so excessive as often to lead to brutal acts. The two went together as indispensable elements of the strongest manliness. They were not always well tempered ; indeed, there was almost always more or less error, now on this side, now on that. Valor often became ferocity and moderation too great submission, or resistance to the correction of errors. The persistence of strong characters was often displayed in the wrong place and English reformers have had to fight long and hard.

But, on the whole, the prime and most valuable qualities of manhood were inherent in the Anglo-Saxon. With incomparable energy and force of will to secure his own rights, as he conceived them, was joined a sense of justice and humanity such as to render him easily capable of the highest and most benevolent civilization. His "heart of oak" is true to the perceptions of his intelligence and will take the highest polish; his character is steel of the best temper and will receive and hold the keenest edge. In history he has been not so much a conqueror as an ardent advocate of his own interests and defender of his own rights. He has always been ready to fight when opposed on these points, but had too much practical sense to love fame or power for their own sake. He has displayed in all times a degree of mental and moral balance rare among nations, and very rare with so much vigor of character and intensity of life. Impetuosity and strength in him are restrained, and are much more effective for the restraint. His measure of reserved force is very great.

CHAPTER V.

MODERN ENGLAND.

With such qualities, and such a history as have been glanced at in the previous chapter, it is not strange that this people should lead the world when modern facilities of action opened all regions to mutual intercourse. For more than a hundred years after the discovery of America they were wholly occupied with domestic disturbances arising from rival claims to the throne or from religious conflicts. Enterprising men took part in the work of discovery, but no considerable part of the people were ready to enter the openings presented. Religious and dynastic conflicts had first to be settled. During the seventeenth century constitutional questions were foremost and the kings and people were engaged in a deadly struggle. This was closed in 1688 by the definite success of the people. Henceforth there were only minor questions of adjustment that would settle themselves, in time, and the people and Government began to prepare for the great commercial career opened to them by universal discovery.

During the troubled times preceding the breaking out of civil war between the King and the Parliament many thousand people emigrated to America for greater liberty to follow their own convictions and to find a more promising field of activity. During the civil commotions terminating toward the close of the seventeenth century they slowly increased and prospered, laying the bases of a new and more liberally organized state, and contributing materially by their trade to the commercial development and prosperity of the Mother Country. England also was slowly gathering her resources and energies for future expansion.

Although England had a considerable commerce in the seventeenth century, which increased rapidly during the eighteenth, she had been essentially an agricultural country up to nearly the close of the latter period. Holland was the leading commercial country during the sixteenth and seventeenth centuries. In the eighteenth England took the lead, very decidedly. Her people showed a capacity for adapting themselves to foreign countries without losing their vigor, and the Government displayed skill and good sense in managing the colonies after they had been acquired. They were gained principally, except the Thirteen American colonies, up to the close of the eighteenth century, by conquest during various wars with European and other powers. Perhaps the resolution and warlike tenacity of the race had even more to do with the gradual extension of the colonies than tact or good sense or lust of conquest. It was certainly by sustained vigor that they were held after being once acquired, and the lesson of conciliatory treatment given by the loss of the American colonies was deeply laid to heart.

Long before the studies and experiences of modern times had taught European statesmen the true theory of colonization and commerce England had acted with instinctive and characteristic liberality toward her foreign possessions. They were held, and often maintained at considerable cost, for their commercial value to the English people. They were not expected to enrich the treasury of the Home Government in any other way. The loss of the American colonies was caused by the attempt to raise a revenue from them to reimburse to the Home Treasury the money spent in armaments and wars for their protection. This was a departure from traditional policy and in violation of rights established by the English people in contest with their kings and always tenaciously maintained by them. The principle was too well recognized in England, and Englishmen in the colonies had too much of the bold and resolute spirit of their race, for such a departure from the constitutional precedents of the of the country to succeed.

The colonies now the United States of America, became another England, still more progressive, in some ways, and not less active. They received and moulded into their own spirit millions of immigrants of other nationalities. Their rapid development of the vast resources of the New World and growing wealth made them much more valuable to England as an independent nation than they could have been as dependent colonies, and the Mother Country grew rich, as they developed, from trade with them.

When the nineteenth century opened England was engaged in a desperate war with Napoleon, the Imperial Genius of the French, as regenerated by the Revolution ten years before, for the commercial supremacy in Europe. She was successful and came out, in 1815, the foremost nation of modern times in political influence and material power. She was "Mistress of the Seas," had acquired possession of India, numerous islands in the West and East Indies, had numerous possessions in Africa, America, Asia and Australia. She was at the threshold of her imperial career. For the last hundred years commerce had stimulated manufactures ever more and more. Invention had produced the steam engine and various manufacturing machinery. An American had invented the Cotton Gin, and that country could supply any desirable quantity of raw cotton for textile fabrics. England's vast trade (for those times) and the wealth of the East Indies had accumulated abundance of capital and her expansion was almost as wonderful and rapid as that of the American Republic.

In 1800 England had about 8,000,000 people, and all the British Islands about 12,000,000. The interests of the people were still largely agricultural and the most valuable part of the productive population was the yeomanry, or small farmers. But commerce, trade, and a twenty years' war had laid the foundation for future changes. Manufactures were already beginning to develop on a scale before unknown in any country, and gradually the whole state of the country underwent an astonishing change. Large towns sprung up, machinery multiplied the possibility of results a hundred fold while greatly cheapening the price of manufactured articles; a stable government, a sober, sensible, vigorous people were prepared to make the most of these new forces, for great operations. Americans were mainly occupied in settling and subduing a vast new interior region, while the neighboring European nations were giving their chief attention to their forms of government. The old forms were antiquated, rigid, and unsuited for modern times, but so firmly upheld by the higher classes, in whose interest they had been built up, that reconstruction could be accomplished only by violence. This kept them disturbed and in a state highly unfavorable to industrial prosperity. So England reaped the first great harvest from invention, machinery and steam as industrial forces.

Her situation, so near the most civilized nations of the Old World ; her position, so favorable for commerce with the New World and with Asia ; her experience in, and almost monopoly of, commerce tended to concentrate capital in her snug, intelligently governed group of islands, and make her the center of a world-wide activity. Her geological and national history seemed to have been conducted in view of the opportunities now opening. Whatever minor difficulties might require removal, there was substantial freedom and self-government for the active classes of her people, and for industry and trade, with an assurance of such tranquility as their progress and prosperity required.

All the great historical commotions had been caused by a slow drifting away of the Government from the original Anglo-Saxon principle of self-governing communities, and the periodical effort of the people to restore the lost force of the individual in the body politic—to maintain "the rights of Englishmen" as against the usurpations of them by the Government. A decisive and lasting victory had been gained more than a hundred years before, although the full benefit of it had yet to be experienced. A quiet, often unperceived, tendency toward liberalizing the Government was in progress. The mass of the people did not govern directly, for the House of Commons was chiefly composed of the higher and wealthier classes ; but those classes were trusted by the people, and fairly represented their interests as then understood. England was really controlled by those who were most intelligent and, if not unselfish, were sensible enough to show a real regard to the popular wishes. When the time came reforms would be made in a quiet, orderly manner, or at least without disastrous public excitement, and business interests might dwell secure under the shadow of the British Constitution.

The production of unlimited steam power required vast quantities of fuel, and it was now found that Nature had supplied this need during the Geological Ages, millions of years before, by surpassingly rich deposits of the best qualities of coal beneath the fertile surface of all the islands. It was especially abundant in England itself, near the trade centers, and in the midst of the largest and most intelligent and enterprising population. Invention of machinery for producing quantities of manufactured goods, limited only by the capacity of the markets of the world to receive, was thus supported in the nineteenth century by all other necessary conditions of overwhelming success. Before proceeding to estimate the vast measure of this success it is desirable to understand about what was the condition of English industry and trade in the last part of the eighteenth century when the new and extraordinary growth began.

The enormous national expansion commenced about the same time in England as in America, and was immediately due to a full command of the same great agent—steam. This mighty energy, which quite transformed the modern world in fifty years, began to give promise of the future by 1815, and to be fully appreciated by 1825 on each side of the Atlantic. Yet great agencies mature slowly. The first railway was built in 1825, and, in 1850, there were but 6,621 miles in the British Islands. The Atlantic was not crossed by steamers till 1838, and British expansion did not acquire its full colossal proportions till Free Trade had been adopted and the gold of California and Australia had supplied to the world a tolerably adequate measure and representative of its increased values. In 1870 the coal raised for use in England was about six million tons. Fifty years later it was a moderate quantity. There was a great but rather slow increase for thirty years longer. About the close of the American Civil War it reached one hundred million tons yearly, and the quantity increased in 1880 to considerably more than one hundred and thirty million tons annually—nearly as much as all the rest of the world, including the United States, produces.

When the French war began, about 1793, England imported much of her iron. In the early years of this century she produced about 150,000 tons annually, and imported about 40,000. After 1824, when the hot blast began to be used in smelting, there was great progress. Soon the annual production reached millions of tons—averaging between 1870 and 1880 about six and a half millions, which is equal to that of all the rest of the world, although most nations enter into competition, or may do so—iron ore being the most common of the metals. This illustrates well the superiority of English energy when once fully launched in pursuit of an end. It improves all advantages and enters into business on the largest scale in order to produce at the least comparative cost, and so triumphs over all competition.

Up to a late period in the last century the means of transport were very imperfect and costly. The improvement of highways and construction of canals proceeded actively after 1760, and by the beginning of the present century the needs of business were fairly met, for that time. The English people had been like an overgrown and careless giant, generally good natured, not readily aroused, living a somewhat rude, rather careless country life in "Merry England"—fierce and warlike at times, but soon subsiding into a quiet life for lack of a sufficient object. While they did not see their way clear to great things, and were not very seriously interfered with in their customary pleasures and rights, they permitted their rulers to think and act for them at their will.

But the long European war of nearly twenty-five years, in which they finally came out victors, aroused them. Powerful instruments of peaceful victories were offered for their use. They turned their awakened energies to new fields of achievement and never again allowed their ambition to be foremost and carry all their undertakings to success, to slumber. A restless and varied activity henceforth contrasted strongly with their previous love of quiet, and dislike to change.

The growth of towns and cities, mining enterprises and a manufacturing population, greatly increased the value of land, so largely held by the nobility and gentry, the middle classes gained enormous wealth in commerce, trade and manufactures and the laboring classes new fields of employment. The desire for setting things right took hold of them. The era of Reforms was opened and one has succeeded another from 1820 to the present. A general serious desire that others besides themselves should have their rights led them to abolish slavery in the British Empire, the larger colonies were permitted the fullest liberty to govern themselves, and they placed themselves, generally, on the side of human liberty and at the head of modern enlightened progress.

They soon became intimately and usefully concerned in the affairs of all nations by an ever-growing trade, and ever new manufactures. They had invented none of the great industries, originally, and rather repulsed than invited them to become naturalized in their island until this period of awakening. Calicoes and cotton fabrics originated in India; silk-weaving was learned from the French and Italians; the Hollanders introduced the fine woolen manufactures; ship-building and the gains of commerce were imitated from the Genoese and Venetians, the German Hanse Towns and the Dutch. Yet when this people, so rich in mental energy and resource, gave their full attention to the pursuit of these industries they acquired an enlargement and scope quite amazing to their inventors.

They had advanced far into the present century before the laws of commerce and trade and economic science, generally, became clear to them. Then they carried reform as near as possible to the bottom of past evils and errors and swept away the hindrances to vast and profitable enterprise. About 1850 the way was fairly open and a great future fully assured. This has been so entirely realized that there has been hardly any comparison between them and particular nations in most great lines of business. In several points the United States has, in recent years, been rising so fast, and with such an incalculable mass of resources for future development, as to indicate that British progress must, in many things, soon pass into some new phase.

Yet there is much for that vigorous and rich young Republic to do before it can take the lead in any of the great modern specialties of British activity. The entire foreign trade of England is about two and a half times larger than that of the United States and about equal to that of France and Germany combined. The United States, with its great variety of productions, differing climates, manufactures, its mines of all kinds and its large population, is a world in itself. Being largely busied in developing new lands and resources and in paying its war debt it shares much less in the general business of the outside world than an old country, or than it will in the future.

In 1801 England imported twenty-one million pounds of cotton; in 1875 sixteen hundred million. In 1785 the export of cotton goods amounted to $4,300,000; in 1810 to $90,000,000; in 1874 to $375,000,000; and woolen manufactures exported in the latter year were valued at $140,000,000. This was the surplus after its own people had been supplied. The textile industries employed over one million persons and the metal manufactures six hundred and fifty thousand. Its coal was worth $230,000,000 per annum, and its pig-iron amounted to $90,000,000 in 1876. With this world-wide trade it had accumulated vast deposits of capital. Much of this was invested in all kinds of enterprises in foreign lands, or loaned on good security and at good interest in a thousand forms, so that it was interested in, and shared the progress and prosperity of all lands.

The commercial marine of England was large for those times at the beginning of the century—or about two million tons capacity. Half the century had passed before this was doubled. Other countries entered into a lively competition with English ships but its superiority has been maintained to this day. In 1876 it reached about six million tons, and, in 1878, over six million two hundred and thirty thousand tons. More than half this was exclusively engaged in foreign trade and a large part of the remainder partly in home and partly in foreign trade. The United States had, at this time, about four million, five hundred and thirty thousand tons, mostly engaged in home trade. More than 70 per cent of its foreign trade was conveyed back and forth by foreign shipping.

The capacity of American shipping was larger than that of any country but England. More than one million tons of sailing and steam capacity were employed on the Northern

Lakes and Western Rivers. The Civil War was disastrous to its shipping then engaged in the foreign trade and this has continued to diminish. It seems likely to revive, in time, and press hard on the heels of British commerce. The last has continued to expand during years of financial depression. It is not easy to foresee its future but there are no present indications of a tendency to decay in this direction. Canada. India and Australia are rapidly coming forward as commercial powers, south Africa seems likely to do so presently, and the British West Indies and South American possessions are likely to show a rapid growth in that near future when, the Isthmus Canal being in use, and the southern United States, Mexico, Central and northern South America being stirred up to great commercial activity, a New Era of earnest progress shall dawn for these tropical regions. England is likely to share in all these rapidly increasing activities, since the more enterprising dwellers in all these regions are of her own race and, in large part, in political dependence on, or intimate relations with, her.

She has, in her islands and resident abroad—but considering Great Britain as " Home "—a people trained to activities and enterprise in the line of this progress; she has vast collections of capital and, after her internal development of the last eighty years, no very important or very extensive calls on the attention of her statesmen to home reforms or on the capital of her business men to develop extensive home interests. Not that reform is complete, or that many branches of home business are not of prime importance, but that all these are well under way. The momentum of the past and the present tendencies in these directions are so well settled as to bring, inevitably, the readjustments that the welfare of the people demands.

CHAPTER VI.

THE WEALTH OF ENGLAND.

The foregoing survey of the leading industrial and commercial branches of the Teutonic race in this century has been more especially directed to the qualities displayed in their history and some of the more modern developments in material progress during the present century. The world hardly realizes all that England has done for it, or how wonderfully she has grown in the last two generations. Americans, especially, have been so intent in pushing forward their own great and profitable undertakings, and so satisfied and impressed with their great success as to have given very imperfect attention to the progress of England during the same time; or, if the greatness and breadth of English activities have been clearly appreciated, they have been inclined to assume that its gradual accumulations in former centuries gave it so many advantages in the start that no really just comparison was possible.

The two great branches of the Anglo-Saxon family are worthy of each other. America has done her toilsome task of building from new foundations in a wilderness and in the midst of the most formidable difficulties with incomparable thoroughness and speed. The wealth that has rewarded her pains was lodged in and beneath her soil with great profusion by nature. She has not been spoiled by success; riches have not relaxed her energies moral, mental, or physical; she has sought fundamental political truths and been, on the whole, thoroughly loyal to it when found. She has emphatically asserted the dignity of labor as against the European aristocratic customs that degraded it. She inherited the institution of servitude for one race and has, at great cost, repudiated it, and otherwise made such liberal progress as the imperfections of human nature permitted. She has done singularly well and is likely to do still better and make a much more impressive showing in the future.

But England was not to be outdone in the field of energy and enterprise. Many of its liberal reforms have gone far to secure the most important rights of manhood, and constituted it a virtual republic; and if its aristocratic classes exert a very large influence in its affairs still, furnishing a great proportion of its officials and leaders in all departments of government and politics, it is chiefly because they identify themselves with the principal interests of the people and the welfare of the country. They do not so much resist the leveling democratic influences of the time, as seek to maintain their ascendency by becoming more worthy and capable and laboring to level the people up to their own standard of character and mental breadth. They are, therefore, justly respected and esteemed beyond the corresponding class of any other country in the world, at any period. They are an ennobling and useful force in English society and the State, adding to the strength of the latter, to the dignity of the former, and furnishing a high standard of excellence to the world. They, naturally, have exerted a strong influence on the highest classes of other countries. In the last century it was often too justly complained that dignity of birth and social station was regarded by the noble and royal classes of European countries as an excuse for the want of most other claims to respect and veneration ; and, if this has generally ceased to be so in all Europe, it is largely due to the example set by the English nobility and gentry. Thus England has known how to keep the lead of modern progress, contributing not a little, in a thousand important ways, to American improvement up to the present time.

English statisticians have, in recent years, undertaken to sum up the material progress of the Home Islands as represented by successive accumulations of wealth. One of these periodical summaries presented the points previously dwelt on, in January, 1878, so impressively that the general facts are extracted from it. It is that of Mr. Robert Giffen, and is accompanied with a table showing the increase of population and wealth of the United States for the same time. The summary of England's wealth is based on official data of 1874–5. The collective property of the people and Government of Great Britain, at that time, was estimated as at least eight thousand five hundred million pounds sterling ; which, at $5 to the pound, would be forty-two thousand five hundred million dollars. The estimate of the United States Census, in 1870, for that country, in which it was given in dollars of the then depreciated currency, was about two-thirds of that sum, or thirty thousand million.

A like estimate of English wealth was made in 1865 by a different, but eminent statistician, and from similar data. The amount then stood at thirty thousand five hundred million dollars—a gain of twelve thousand million dollars in ten years. This is a vast sum, indeed, although nominally the United States gained by the official showing of the Census, between 1860 and 1870, about two thousand million dollars more, in spite of four years of civil war and waste. The discount on the paper dollar of the Republic at that time would make its gain nearly four hundred million less than that of England—yet the gain during the next five years was much greater than at any other period, and the gain from 1865 to 1875, the period on which the increase in England was computed, must have been at least equal, and probably considerably larger, for it was, during those years, in the full flush of the most rapid and comprehensive development of its virgin resources.

The personal property of the more prosperous part of the people that has borne the burden of taxation in England has been computed by a third statistician to have increased between the years 1814 and 1845, as follows :

1814	$6,000,000,000.
1819	6,500,000,000.
1824	7,500,000,000.
1829	8,500,000,000.
1834	9,000,000,000.
1841	10,000,000.000.
1845	11,000,000,000.

The later authorities make this portion of English wealth $17,500,000 000, nearly, in 1865, and in 1875 nearly $25,000,000,000. Thus it is seen that the increase in this division of the property of England during one decade was much more than all the personal property of Englishmen at the close of the long European war in 1814, and three-fourths of the whole as late as 1841. It was after 1850, when the gold of California and Australia had increased the working capital of the world so remarkably, that a colossal expansion of business activity and the period of immense profits commenced. Railroads and Telegraphs furnished means for any desirable activity in home industry and trade, and the steam vessel, submarine telegraph and railways in other countries furnished the opening England needed in the foreign world for the vast extension of her commerce and the full use of her machinery, laborers and capital in manufacturing profitably at home.

Great Britain emerged from the European and last American wars in 1815 with a Public Debt of about four thousand five hundred million dollars, which has been reduced by refunding and payment to something less than four thousand millions. This was a vast burden to be borne during the fifty years that passed while the country was organizing and expanding its great industries. The property of the people, on which this was a first mortgage, was about eleven thousand million dollars. The liabilities were therefore more than a third of the assets. This debt was almost entirely invested or due at home, and the interest on it was promptly paid year by year. In 1815 the annual income of the people from their then capital is stated to have been about $450,000,000, about one-third of which was required to meet the interest of the debt. At the present time (or in 1875) the annual income from capital is more than $2,225,000,000, and the interest charge of the debt is about $105,000,000, or one twenty-second part. The people earn more per head of the population, and are in a much better situation every way, both as to present and the future, from increased mental, technical and material resources in many ways, aside from the accumulations of income, by twenty-two times.

Thus it is seen that the burden of the debt and the cost of government with all its increased outlays for the welfare of commerce, for sanitary purposes and for education, dwindles constantly in proportion to the private resources of the people. The laboring population is better lodged and fed, while relieved of an incalculable amount of drudgery by the universal use of machinery where it is possible to employ it, with shorter hours of employment and a constant influx of new ideas and stimulus to thought.

The increase of property from 1865 to 1875 was about 40 per cent and its increase per head of population was about 27 per cent. So our statistician declares that the nation might lose one-fourth of its property and still be as rich as it was in 1865. There is, therefore, an immense margin for fluctuations and changes without seriously damaging the resources of the people. Those resources have been proved, by this vast prosperity of a portion of a century, to lie largely in the mind and skilled energy of the race. It may be said that all branches of this race have been at least proportionately prosperous when separated from the Mother Country and managing for themselves, whether in colonies, as in Canada and Australia, or in entire independence, as in the United States.

We have seen how this independent stock improved, both in quality and measure, in the Republic, and the more completely it leaves behind the embarrassments that caused, and were caused by, the Civil War the stronger grows the evidence that its great career is scarcely begun and that its normal rapidity and momentum of progress have not yet been reached. It is not easy for the Anglo-American to see that the material progress of England should still keep her ahead and may do so for years to come. The secret is one of character, of mental force, and of steadiness and skill in management. The special form government has assumed and the methods by which great changes are made in England have some important advantages that partly equalize the special superiorities of American resources and habits and the more direct and immediate operation of its radical principles of manhood rights.

The English Parliament may be considered to embrace, in general, the best representatives of all its superior classes—that which has the most dignified and cultured ancestry, the aristocracy of intelligence, the most successful and largest minded business men and a good representation of its best laboring classes. The past history of the country, its social structure, the influence of precedent, and the many special circumstances controlling the selection of members of the House of Commons unite in rendering them vigorously conservative and carefully progressive. They substantially direct executive policy as well as make laws. They hold firm control over all the interests of the country and are prepared to act with greater vigor and thoroughness when they see cause than a body of men more perfectly representative of the absolute average of the whole population and whose duties are more purely legislative.

The Cabinet has more concentrated vigor at command for any special occasion; they can command the Ship of State, can control and direct its movements more perfectly than a less select body of men in a country less under the influence of its traditions and its higher classes. The policy of the Republic is better for the working out of its fundamental principle —the elevation of its lower and less cultured citizens. But there is a growing strength in the Anglo-American system, which, if it is less effective at special times, and in earlier periods of its development, tends to give greater breadth and massiveness and variety to its growth. The power elevating its people, inspiring the universal mind to independent action, and conferring skill of execution on the universal hand, goes to the lowest strata of the general mass, tends to bring it to the level of the higher and into the most intimate sympathy with the general tone of progress. Thus the greater possibilities of America are in the future. It can do less as compared with England at once, but probably more in the end. The progress is more a general and popular one, in which every individual citizen—of the lower grade especially—shares more fully in the increase of force and skill than in England.

England attends to the prosperity and elevation of her lower classes more and more, but in the style of a schoolmaster or tutor, which does not call out the mental force in growth so fully as when, in America and the self-ruling colonies, those classes are pronounced of age and take all the responsibilities of life on them. The difference in the end is important. In England this result is—and will continue to be more and more—modified by intimacy of connection with the colonies. Her lower classes may emigrate to the self-ruling colonies and enter on a course of most vigorous self-education. They often return "Home," developed and capable, to take their places among the higher and ruling classes there, and communicate a stronger upward impulse to the class from which they sprung. It is a curious and interesting question how nearly England matches the rising popular force in America. A race, a trial of rapidity in progress and growth, is being made by monarchial England and her democratic descendant across the ocean. Americans are sure they shall come out far ahead; but England holds her course well for the present. Can she in the future? It remains to be seen.

The following tables give the English estimates of the wealth of the Home Empire for 1865 and 1875, summaries of which have been given above in dollars. They are here presented in their original form, estimated in pounds sterling, as a means of verifying—or modifying if they shall seem to any one to justify that—the conclusions of this chapter. The table showing the material progress of the United States in summary decennial statements from the official census by decades (estimated before 1840) from 1790 to 1870, is also presented for comparison:

APPROXIMATE ACCOUNT OF CAPITAL AS PROPERTY IN THE UNITED KINGDOM IN 1865 AND 1875 COMPARED.

	1865.	1875.	Increase in 1875.	
			Amount.	Pr. ct.
	Millions.	Millions.	Millions.	
Lands	£1,864	£2,007	£143	8
Houses	1,031	1.420	389	38
Farmers' profits	620	668	48	8
Public funds, less home funds	211	519	308	146
Mines	19	56	37	195
Iron-works	7	29	22	314
Railways	414	655	241	58
Canals	18	20	2	11
Gas-works	37	53	16	43
Quarries	2	4	2	100
Other profits	55	84	29	53
Other income tax, income principally trades and professions and public companies	659	1,128	469	71
	4,938	6,643	1,706	35
Trades and professions omitted	75	105	30	40
Income from capital of non-income tax-paying classes	200	300	100	50
Foreign investments not in Schedules C and D	100	420	300	300
Movable property not yielding income	500	700	200	40
Government and local property, say	300	400	100	33
	6,113	8,548	2,486	40

STATEMENT SHOWING THE POPULATION AND WEALTH OF THE UNITED STATES BY DECADES, FROM 1790 TO 1870; DECENNIAL PERCENTAGE INCREASE OF POPULATION; DECENNIAL PERCENTAGE INCREASE OF NATIONAL WEALTH; AND AVERAGE PROPERTY OF EACH PERSON.

YEAR.	Population.	Decennial percentage increase of wealth.	Decennial percentage increase of population.	Decennial percentage increase of wealth.	Average property to each person.
			Per cent.	Per cent.	
1790....	3,929,827	$750,000,000 (estimated)	——	——	$187.00
1800....	5,305,937	1,072,000,000 (estimated)	35.02	43.0	202.13
1810....	7,239,814	1,500,000,000 (estimated)	36.43	39.0	207.20
1820....	9,638,191	1,882,000,000 (estimated)	33.13	25.4	195.00
1830....	12,866,020	2,653,000,000 (estimated)	33.49	41.0	206.00
1840....	17,069,453	3,764,000,000 (official)	32.67	41.7	220.00
1850....	23,191,876	7,135,780,000 (official)	35.87	89.6	307.67
1860....	31,500,000	16,159,000,000 (official)	35.59	126.42	510.00
1870....	38,558,000	30,069.000,000 (official)	22.00	86.13	776.96

It may be observed on the above data that the statisticians did not find reliable means for ascertaining the real distribution of this vast increase of English wealth among the various classes of the population. Capital has certainly accumulated there and in America, in a large measure, in great masses, although the greater masses are commonly held by corporations, the number of whose individual members it is impossible to ascertain. The rich have undoubtedly reaped a large share of the harvest ; yet very large numbers of the poor of former periods have become rich, and the condition of the laboring classes has been, generally, much improved. In America there is a much wider distribution of the general wealth. All classes are fairly comfortable ; a large part of the people live in their own houses on their own land, and most of those who do not are in receipt of comfortable incomes which they are not inclined to invest in real estate.

To the question whether the English people continued to prosper during the depression commencing in 1874 and nearly at its height when these inquiries were instituted, and to invest their capital as had been uniformly the case during the previous part of the century, the answer by the statistician was in the affirmative. Although business was dull and under reorganization, to some extent, the entire mass of it was diminished only by a few tens of millions of dollars—an unimportant fraction compared with the whole. Accumulation constantly goes on, even if less in sum. Much of it arises from foreign investments and times of business pressure are vigorous teachers of economy and prudence ; so that probably as much is permanently saved as is lost by slackness of production.

Nor is it at all probable that the limit of English expansion is being approached. Englishmen and English capital were never before possessed of so wide a field, of so many skillful instruments of successful activity as now. They have been long in process of constantly accelerating growth ; they are not now for the first time exposed to competition. They have ever had all Europe, as well as America, to meet in the general markets of the world ; they have now more than ever courage, boldness, enterprise, science, invention, factories, machinery, and skilled workmen, and vast accumulations of realized wealth. There seems to be no reason why this vigorous, ambitious people—of all others best endowed with clear sound sense for the management of business—should be arrested in mid career. If America do her best it will be long before she can take precedence of Great Britain, except in some special lines where her vast breadth and depth of resources, and superior convenience of access to them when wanted, give her an incontestable advantage.

The number of these natural advantages will increase, and it is possible that at some time in the future much of English capital and energy may be transferred to the colonies or the United States for more economical use; but Anglo-Saxon vigor and intelligence will lead the world still, abroad or at home, and there is yet no sign that the center is in serious danger of being removed from Great Britain.

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